

Antonio Parkway Widening Project

ORANGE COUNTY, CALIFORNIA
Unincorporated Orange County, Antonio Parkway

EA #12-932073L

Environmental Assessment with Finding of No Significant Impact



Prepared by the

State of California Department of Transportation

The environmental review, consultation, and any other action required in accordance with applicable Federal laws for this project is being, or has been, carried out by Caltrans under its assumption of responsibility pursuant to 23 U.S.C. 327



July 2010

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The project proposes to widen the existing Antonio Parkway, located in unincorporated Orange County, California for an approximate 1.4-mile segment. The project limits begin at approximately 2,000 feet south of the intersection at Covenant Hills Drive (the southern boundary of the Ladera Ranch Planned Community) and extend approximately 7,900 feet (1.4 miles) south. This would extend the improvements approximately 900 feet south of the intersection with State Route 74 (SR-74).

ENVIRONMENTAL ASSESSMENT

Submitted Pursuant to:
(Federal) 42 USC 4332(2)(C)

THE STATE OF CALIFORNIA

Department of Transportation as assigned under NEPA

July 30, 2010
Date of Approval

Cindy Quon
Cindy Quon
District Director
California Department of Transportation

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**CALIFORNIA DEPARTMENT OF TRANSPORTATION
FINDING OF NO SIGNIFICANT IMPACT**

FOR

**Antonio Parkway Widening Project
12-ORA-Antonio Parkway, Unincorporated Orange County**

The California Department of Transportation (Caltrans) has determined that the Build Alternative (Preferred Alternative) will have no significant impact on the human environment. This Finding of No Significant Impact (FONSI) is based on the attached Environmental Assessment (EA) and associated technical studies which have been independently evaluated by the Department and determined to adequately and accurately discuss the need, environmental issues, and impacts of the proposed project and appropriate mitigation measures. It provides sufficient evidence and analysis for determining that an EIS is not required. The Department takes full responsibility for the accuracy, scope, and content of the attached EA and the associated technical studies documents as appropriate).

The environmental review, consultation, and any other action required in accordance with applicable Federal laws for this project is being, or has been, carried-out by the Department under its assumption of responsibility pursuant to 23 U.S.C. 327.

Notwithstanding any other provisions of law, a claim arising under federal law seeking judicial review of the permit, license, or approval issued by a federal agency for a highway or public transportation project shall be barred unless it is filed within 180 days after publication of a notice in the Federal Register announcing that the permit, license, or approval is final pursuant to the law under which agency action is taken, unless a shorter time is specified in the federal law pursuant to which judicial review is allowed.

Date

July 30, 2010


Cindy Quon
District Director
California Department of Transportation

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SUMMARY

Changes have been made to this environmental document since the public circulation of the draft environmental document. Public and agency comments received during the circulation of the Draft Environment Assessment have resulted in refinements that have been incorporated into this final environmental document. A vertical line in the outside margin indicates changes in the document.

The project is subject to federal as well as State environmental review requirements because the County of Orange proposes the use of federal funds from the Federal Highway Administration (FHWA). Project documentation, therefore, has been prepared in compliance with the National Environmental Policy Act (NEPA). The County of Orange is the project proponent and the lead agency under the California Environmental Quality Act (CEQA). FHWA's responsibility for environmental review, consultation, and any other action required in accordance with applicable Federal laws for this project is being, or has been, carried out by the Department under its assumption of responsibility pursuant to the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) (23 U.S.C. 327).

While this project is subject to the requirements of both NEPA and CEQA, separate environmental documents have been prepared, one that complies with NEPA and another that complies with CEQA. This EA complies with the requirements of NEPA and other federal environmental laws. Compliance with CEQA and State environmental laws is provided with Final Environmental Impact Report (FEIR) 555 (prepared in 1995), Addendum to FEIR 555, and Addendum No. 2 to FEIR 589, which was approved by the County of Orange on December 31, 2008.

Following receipt of public comments on the EA and noticing of the public availability of the EA, the Department has decided to issue a Finding of No Significant Impact (FONSI).

Overview of the Project Area

Antonio Parkway is located approximately 2.5 miles east of Interstate 5 (I-5) and provides the only direct route between the communities of Ladera Ranch, Mission Viejo, and Rancho Santa Margarita. At State Route (SR) 74, the name of the roadway changes to La Pata Avenue, which extends to the south and currently terminates at the Prima Deshecha Landfill. The Orange County *Master Plan of Arterial Highways* (MPAH) depicts La Pata Avenue as continuing through the landfill to Avenida Pico in the City of San Clemente.

Antonio Parkway has been constructed to full standard to the southern boundary of the Ladera Ranch Planned Community; it is a four-lane roadway from the Ladera Ranch Planned Community's southern boundary to SR-74. The bridge across San Juan Creek was built as part of the initial phase of improvements associated with the Ladera Ranch Planned Community and is 68 feet wide. No lighting or sidewalks have been provided south of the Ladera Ranch Planned Community since these would be implemented as part of ultimate improvements. Though only interim improvements were constructed within the study area, the ultimate right-of-way was graded from the southern boundary of Ladera Ranch to the San Juan Creek Bridge with the initial phase of construction in 1998. In 2007, the vegetation in this area,

including the area beneath the bridge, was mowed. As a result, the vegetation on site is limited to regrowth.

Key features within and adjacent to the project limits include the following:

- San Juan Creek, located north of SR-74, is a major drainage facility that flows in an east-west direction through the project site. The Creek discharges into the Pacific Ocean in the vicinity of the City of Dana Point.
- SR-74 connects Riverside and Orange Counties, traversing the Cleveland National Forest. Improvements are currently being constructed to widen SR-74 to 4 lanes from the County of Orange/City of San Juan Capistrano boundary to approximately 1,900 feet east of Antonio Parkway. This is a distance of approximately one mile.
- Southern boundary of the Ladera Ranch planned community is located at the north limits of the project site. This planned community is mostly built out and provides for a mix of residential and commercial uses.
- Rancho Mission Viejo owns the majority of the land adjacent to the project site. Their headquarters are located approximately $\frac{1}{3}$ mile west of the project limits.
- The Rancho Mission Viejo Riding Park at San Juan Capistrano, an equestrian sports center located at the southern end of project at the SR-74/La Pata Avenue Intersection, was acquired by the City of San Juan Capistrano in January 2010. The use will remain the same.
- The City of San Juan Capistrano is located along the southern side of SR-74, as far east as the SR-74/Antonio Parkway/La Pata Avenue intersection.
- San Juan Hills High School is located at 29211 Vista Montana, San Juan Capistrano, which is approximately 0.75 mile south of the SR-74/La Pata Avenue intersection. La Pata Avenue provides the only access to the school.
- Whispering Hills Planned Community is a proposed residential neighborhood next to San Juan Hills High School that is scheduled to construct models in late 2010.
- The Prima Deshecha Landfill is located at 32250 La Pata Avenue, San Juan Capistrano. The landfill is located at the current terminus of La Pata Avenue. The entrance to the landfill is approximately 1.8 miles south of the Antonio Parkway/La Pata Avenue/SR-74 intersection. La Pata Avenue provides the only access to the landfill.
- Terra Verde is a green waste recycling site adjacent to the Prima Deshecha Landfill.

Purpose and Need

Purpose

The purpose of the proposed project is to accomplish the following specific objectives:

- To provide sufficient transportation infrastructure to meet the long-term travel demand for southeastern Orange County.
- To provide improvements consistent with planning programs, including the Orange County *Master Plan of Arterial Highways* and the County of Orange *Transportation Element*.
- To provide improvements to satisfy long term transportation demand planning for the region.

Need

The project's need has been established through a number of previous studies. The roadway was originally designated on the County of Orange Transportation Element as a commuter highway with a "right-of-way reserve" designation for a major arterial highway. The "right-of-way reserve" designation is used when origin-destination needs have been identified but the ultimate capacity requirements have not been established. In 1995, the County of Orange conducted studies to establish a precise alignment and capacity requirements for Antonio Parkway. As a result of these studies, Antonio Parkway was designated as a major arterial highway, which is a 6-lane, divided roadway with 120 feet of right-of-way. This need has been confirmed through subsequent studies conducted for the Ranch Plan, including FEIR 589.

Alternatives Considered

This Environmental Assessment (EA) evaluates a Build Alternative, also referred to as "the proposed project", and the No Build (No Action) Alternative. The Build Alternative is the preferred alternative. Though other build alternatives were evaluated through the planning process, an alignment selection was made in 1995 and the initial phase of the project was constructed.

Build Alternative "Proposed Project" (*Preferred Alternative*)

The Antonio Parkway widening project proposes the addition of an additional lane in each direction to the existing Antonio Parkway for an approximate 1.4-mile segment within unincorporated Orange County, California. Turn lanes would be provided at SR-74 and at future local intersections. The project limits begin at approximately 2,000 feet south of the intersection at Covenant Hills Drive (the southern boundary of the Ladera Ranch Planned Community) and extend approximately 7,900 feet (1.4 miles) south. This would extend the improvements approximately 900 feet south of the intersection with SR-74, which is known locally as Ortega Highway. South of SR-74, Antonio Parkway changes name and is known as La Pata Avenue. Extending the improvements through the intersection is required to facilitate traffic operations and to provide for a safe transition to the existing lane configuration on La Pata

Avenue. The improvements would utilize the existing roadway centerline, profile, and standard super-elevation rates.

The project is in the *2008 Regional Transportation Plan (2008 RTP) (Amendment 2)* and the *2008 Regional Transportation Improvement Program (2008 RTIP) (Amendment #08-24)*, approved on December 3, 2009. The 2008 RTIP identifies the project as follows: “Build out Antonio Parkway to its Master Plan of Arterial Highways Designation width between Ladera planned Community and Ortega Highway by widening the road from four to six lanes. The Project will include widening Antonio Parkway by one lane in each direction”.

Project implementation is projected to start in 2011 and take approximately two years to complete.

No Build (No Action) Alternative

The No Build Alternative is considered the base case scenario and proposes that no improvements be implemented at this time. Antonio Parkway would remain as a four-lane roadway south of the Ladera Ranch Planned Community boundary.

Identification of the Preferred Alternative

The Project Development Team (PDT) evaluated the environmental impacts associated with the Antonio Parkway widening project as outlined in this EA including the comment letters received during the public review period. The PDT weighed the ability of the alternatives to meet the project objectives and recommended the Build Alternative as the Preferred Alternative. This determination is discussed in Chapter 1.

Summary of Potential Impacts

The following matrix provides a summary of the potential impacts associated with the Build Alternative, “proposed project” (Preferred Alternative), and the No Build Alternative.

**Table S.1
Summary of Potential Impacts**

Topic	Proposed Project (Preferred Alternative)	No Build Alternative
Land Use		
Existing and Future Land Use	No impact. No measures necessary.	The proposed project represents an important component of the planned circulation network that is required to serve planned land uses. This alternative could lead to ineffective land development patterns.
Consistency with State, Regional, and Local Plans	No impact. No measures necessary.	The No Build Alternative would be inconsistent with local and regional planning programs. The County General Plans, the RTP, and RTIP recognize the proposed project as a planned activity.

**Table S.1
Summary of Potential Impacts
(Continued)**

Topic	Proposed Project (Preferred Alternative)	No Build Alternative
Growth	The project would serve the adopted growth projections for the region. No measures are necessary.	Though the No Build Alternative would not provide the planned infrastructure to support the planned growth, it is unlikely that it would affect the growth distribution in the region.
Community Impacts		
Community Character/ Cohesion	No impact. No measures necessary.	No impact. No measures necessary.
Relocation	No impact. No measures necessary.	No impact. No measures necessary.
Environmental Justice	No impact. No measures necessary.	No impact. No measures necessary.
Utilities/Emergency Services	<p>Minor modifications to the existing storm drain system have been incorporated as part of project design, which would accommodate anticipated flows.</p> <p>Due to roadway grading, existing utilities would be relocated to ensure they are located outside of the roadbed. No additional grading would be required to accommodate the relocation of utilities. With implementation of standard engineering practices, no service interruptions would occur. Provisions for future extension of utilities have been incorporated into the bridge design.</p> <p>No long-term or short-term impacts to emergency services are anticipated. The roadway would be open to ensure continued emergency access during construction.</p>	No impact. No measures necessary.
Traffic and Transportation (short term)	The roadway would be open during construction. A Traffic Management Plan would be prepared during final design, which would minimize construction impacts. No measures beyond the preparation of the Traffic Management Plan would be required.	No impact. No measures necessary.
Traffic and Transportation (long term)	<p>The proposed project would provide long-term beneficial effects by improving the overall traffic level of service in the study area. Under baseline conditions, the Antonio Parkway/SR-74 intersection operates at a deficient level of service. There would be no projected deficiencies in 2015 or 2035 with the Build Alternative.</p> <p>* A deficient LOS is a Level E or worse.</p>	<p>With this alternative, if SR-241 is not extended, the Antonio Parkway/Cow Camp Road and the Antonio Parkway/SR-74 intersections are projected to operate at a deficient level of service in 2035 for both the AM and PM peak hours, utilizing the intersection capacity utilization (ICU) methodology.</p> <p>If SR-241 is extended, the Antonio Parkway/Cow Camp Road intersection is projected to have a deficient ICU in 2035 in the PM peak hour and the Antonio Parkway/"C" Street intersection would have a deficient ICU in the AM peak hour.</p>

Table S.1
Summary of Potential Impacts
(Continued)

Topic	Proposed Project (Preferred Alternative)	No Build Alternative
		Utilizing the Highway Capacity Manual (HCM) methodology, the Antonio Parkway/SR-74 intersection is projected to operate at a deficient level of service in 2035 for both the AM and PM peak hours.
Visual/Aesthetics	The project elements that would not create substantial visual contrast because it would be widening an existing facility. There would not be a need for sound walls. There is a retaining wall on the western side of La Pata Avenue. Approximately four to five feet of the wall would be visible. Visually, the new bridge structure would appear as a widening of the existing structure.	No impact. No measures necessary.
Cultural Resources	Three known cultural sites are recorded within the Area of Potential Effect (APE). No direct effects will take place on historic properties.	No impact. No measures necessary.
Physical Environment		
Hydrology and Floodplain	The project would have no adverse effects on hydrology or the floodplain.	No impact. No measures necessary.
Water Quality and Storm Water Runoff	A Storm Water Pollution Prevention Plan (SWPPP) would be prepared prior to grading, and Best Management Practices (BMPs) would be incorporated to ensure that the project would not adversely affect water quality. Project design includes treatment BMPs to protect water quality in San Juan Creek.	No impact. No measures necessary.
Geology/Soils/Seismic/ Topography	During construction the project site would be subject to erosion. BMPs would be implemented to control erosion and sedimentation. There are isolated zones near the Antonio Parkway Bridge that may be subject to liquefaction during a seismic event. Standard engineering practices would correct this condition.	No impact. No measures necessary.
Hazardous Waste/ Materials	Construction vehicles would transport materials classified as hazardous materials or waste to and from the project study area. Though not identified as an adverse impact, the effect would be further minimized with the development of a Health and Safety Contingency Plan.	No impact. No measures necessary.
Air Quality	No substantial air quality impacts were identified. The project would be required to follow the South Coast Air Quality Management District's (SCAQMD's) Rule 403 regarding fugitive dust. Additionally, standard provisions would minimize ozone precursors (nitrogen oxides [NOx] and reactive organic gases.	No construction impacts.

**Table S.1
Summary of Potential Impacts
(Continued)**

Topic	Proposed Project (Preferred Alternative)	No Build Alternative
Noise	No project impacts were identified. No measures necessary.	No impact. No measures necessary.
Biological Environment		
Biological Resources	<i>Coastal Sage Scrub:</i> The proposed project would affect 9.6 acres (6.7 acres permanent, 2.9 acres temporary) of coastal sage scrub. The proposed project effects are consistent with the assumptions of the Southern Subregional NCCP/MSAA/ HCP and mitigation has already been provided. Therefore, the proposed project effects would be considered less than substantial.	No impact. No measures necessary.
	<i>Annual Grassland:</i> The proposed project would affect 14.4 acres (8.0 acres permanent, 6.4 acres temporary) of annual grassland. The proposed project effects are consistent with the assumptions of the Southern Subregional Habitat Conservation Plan (Southern HCP) and mitigation has already been provided. Therefore, the proposed project effects would be considered less than substantial.	No impact. No measures necessary.
	<i>Riparian:</i> The proposed project would affect 2.7 acres (0.0 acre permanent, 2.7 acres temporary) of riparian vegetation. The proposed project effects are consistent with the assumptions of the Southern Subregional NCCP/MSAA/HCP and mitigation has already been provided. Therefore, the proposed project effects would be considered less than substantial.	No impact. No measures necessary.
	<i>Oak Forest:</i> The proposed project would affect 0.2 acre (0.0 acre permanent, 0.2 acre temporary) of oak forest. The proposed project effects are consistent with the assumptions of Southern Subregional NCCP/MSAA/HCP and mitigation has already been provided. Therefore, the proposed project effects would be considered less than substantial.	No impact. No measures necessary.

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Chapter 1—Proposed Project

INTRODUCTION

The California Department of Transportation (Department), as assigned by Federal Highway Administration (FHWA) and in cooperation with the County of Orange, proposes to widen an approximate 1.4-mile segment of Antonio Parkway in unincorporated Orange County, California. The project would provide an additional lane in each direction, turning lanes at State Route (SR) 74, and improvements for turn lanes at future intersections within the project study area. The improvements would utilize the existing roadway centerline, profile, and standard superelevation rates. Figure 1 provides a regional location map and Figure 2 provides a local vicinity map of the project area.

Antonio Parkway is designated as a major arterial highway (six-lane divided roadway) on the County of Orange Circulation Plan component of the Transportation Element and on the Orange County *Master Plan of Arterial Highways* (MPAH). In its entirety, Antonio Parkway is approximately 10.5 miles long, initiating at Avenida de las Flores in the City of Rancho Santa Margarita and extending south to La Pata Avenue in unincorporated Orange County. La Pata Avenue is designated as a primary arterial highway (four-lanes, divided) on both these circulation plans. Currently, La Pata Avenue extends approximately two miles south of its connection with Antonio Parkway. Ultimately, La Pata Avenue is planned to extend south and connect with Avenida La Pata in the City of San Clemente. Figure 3 depicts the MPAH with the project limits noted.

In 1995, the County of Orange initiated a route location study for the portion of Antonio Parkway from the southern boundary of the Las Flores Planned Community south to SR-74, a distance of approximately five miles. This study also involved a General Plan Amendment that established land uses for the Ladera Ranch Planned Community. Final Environmental Impact Report 555 (FEIR 555) was prepared to address the environmental impacts associated with building Antonio Parkway and the Ladera Ranch Planned Community. The FEIR evaluated a range of alignment alternatives for Antonio Parkway. The eastern alignment was selected by the Board of Supervisors as the preferred alternative.

The FEIR evaluated the impacts associated with the construction of the ultimate roadway width (six-lane divided roadway), but identified that roadway construction would be phased. In 1998, the initial four lanes of Antonio Parkway were constructed as the first phase of the project. Through the Ladera Ranch Planned Community, the roadway has been widened to the full six lanes in conjunction with the construction of the adjacent land uses.

Antonio Parkway has also been included in three other regional studies: the Ranch Plan Planned Community, the Southern Habitat Conservation Plan (Southern HCP), and the San Juan Creek and Western San Mateo Creek Watersheds Special Area Management Plan (SAMP). These plans are further discussed in Chapter 2 of this document. The Ranch Plan Planned Community is discussed in the Human Environment and the other two plans are discussed under Biological Environment.

The project is in the 2008 Regional Transportation Plan (2008 RTP) (Amendment 2) and the 2008 Regional Transportation Improvement Program (2008 RTIP) (Amendment #08-24), approved December 3, 2009. The RTIP identifies the project as follows: “Build out Antonio Parkway to its Master Plan of Arterial Highways Designation width between Ladera planned Community and Ortega Highway by widening the road from four to six lanes”. Project implementation cost for the Preferred Alternative is approximately \$32 million.

PURPOSE AND NEED

Purpose

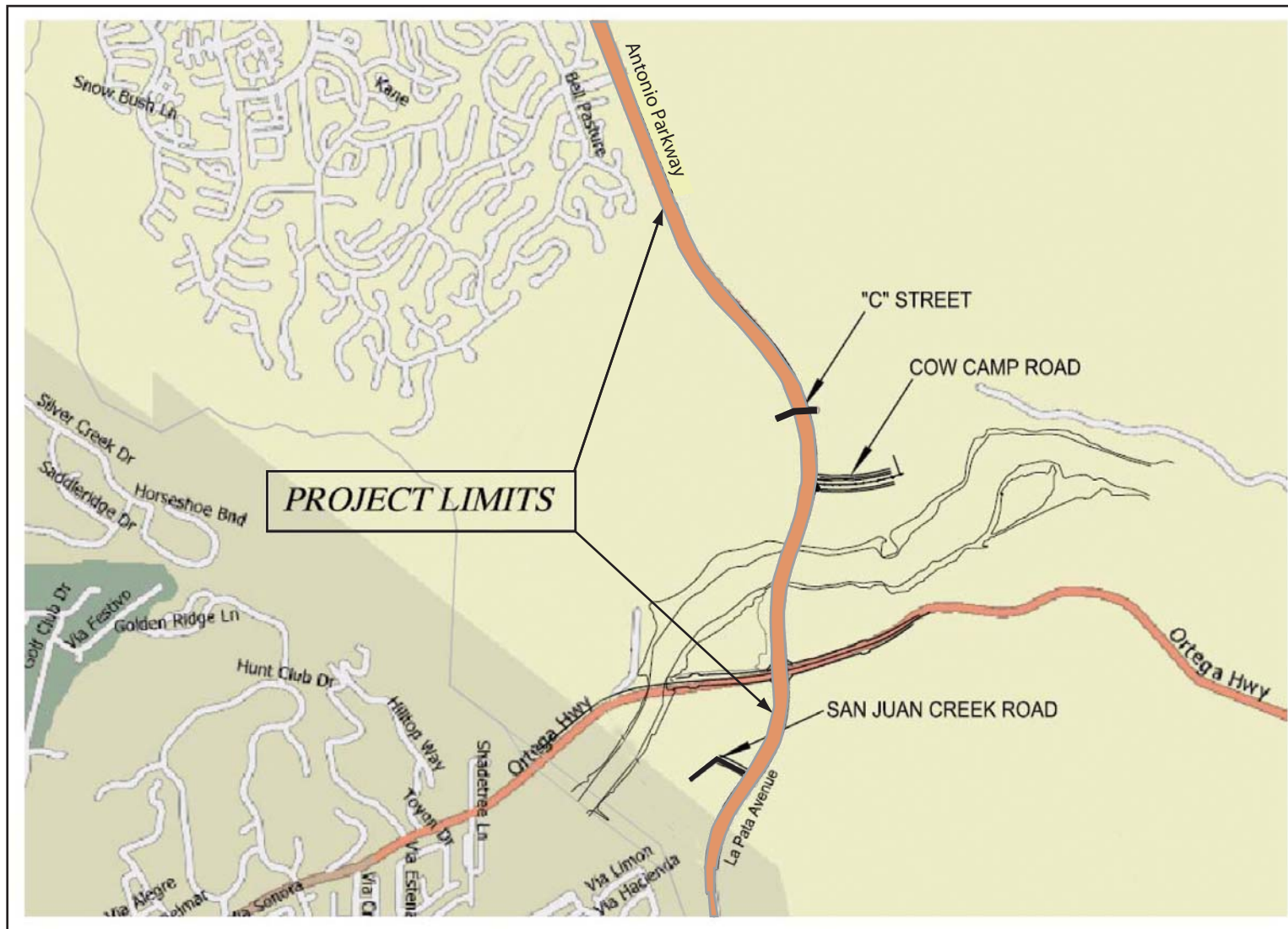
The purpose of the proposed project is to accomplish the following specific objectives:

- To provide sufficient transportation infrastructure to meet the long-term travel demand for southeastern Orange County.
- To provide improvements consistent with planning programs, including the Orange County *Master Plan of Arterial Highways* and the County of Orange *Transportation Element*.
- To provide improvements to satisfy long term transportation demand planning for the region.

Need

Project Background

The project’s need has been established through a number of previous studies. The roadway was originally designated on the County of Orange Transportation Element as a commuter highway with a “right-of-way reserve” designation for a major arterial highway. The “right-of-way reserve” designation is used when origin-destination needs have been identified but the ultimate capacity requirements have not been established. In 1995, the County of Orange conducted studies to establish a precise alignment and capacity requirements for Antonio Parkway. As a result of these studies, Antonio Parkway was designated as a major arterial highway, which is a 6-lane, divided roadway with 120 feet of right-of-way. This need has been confirmed through subsequent studies conducted for the Ranch Plan, a large-scale Planned Community adjacent to Antonio Parkway. The Ranch Plan project and FEIR 589 were approved by the Orange County Board of Supervisors in November 2004.



Source: Huitt-Zollars

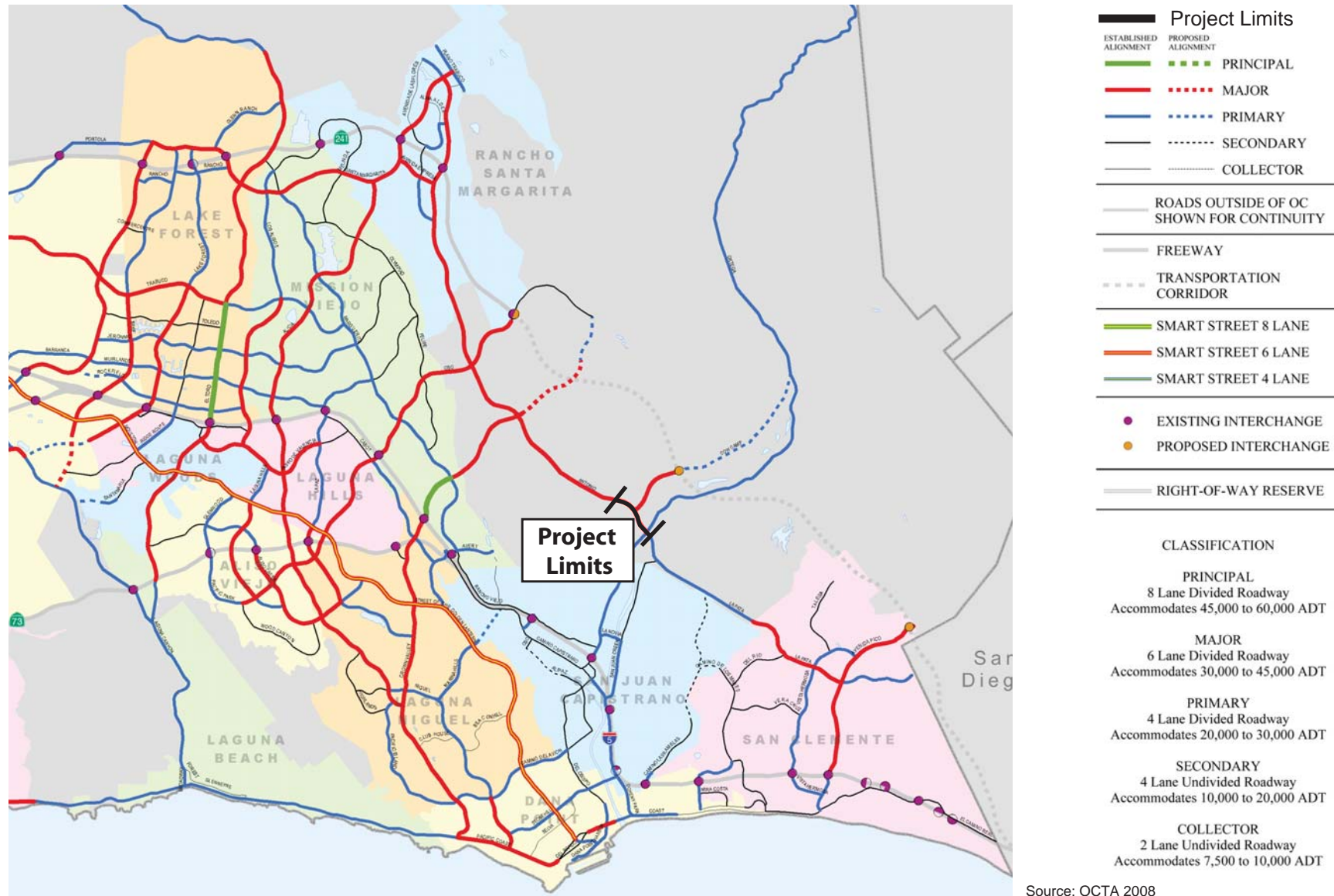
Local Vicinity

Antonio Parkway Widening



Map not to scale

Figure 2



Master Plan of Arterial Highways for the Project Area

Figure 3

Antonio Parkway Widening



Existing Deficiencies

The traffic analysis is taken from the *Antonio Parkway Traffic Study*, prepared by Austin Foust Associates (2009). The existing roadway system and traffic volumes are presented in Figure 4. Existing volumes are based on traffic count data collected in 2007 and 2008. Checks were made against selected 2009 data to determine if the 2007/2008 data was adequate for representing 2009 conditions. The results showed that minimal growth in traffic had occurred over that two-year period (in some cases it had decreased) and hence the 2007/2008 information is adequate to represent existing conditions.

Table 1 lists the existing peak hour intersection capacity utilization (ICU) values for the existing study area intersection together with the level of service¹ (LOS) designations. Also listed here are the delay-based LOS designations calculated based on the Department's *Highway Capacity Manual* (HCM) protocol. As can be seen, the Antonio Parkway/SR-74 intersection LOS does not achieve the desirable threshold of "D" in the AM peak hour.

Table 1
Existing Conditions (2007/2008)
Level of Service Summary

Intersection	AM Peak Hour		PM Peak Hour	
	ICU	LOS	ICU	LOS
ICUs				
Antonio Pkwy and SR-74	0.97	E	0.80	C
Intersection	AM Peak Hour		PM Peak Hour	
	Delay	LOS	Delay	LOS
HCM DELAY				
Antonio & SR-74	71.1	E	37.4	D
Note: Shading indicates that LOS does not achieve the desirable threshold of "D".				
Source: Austin Foust Associates, December 2009.				

Social Demands or Economic Development

Orange County has experienced significant growth in population over the past 40 years. Population in the county has increased from 216,200 in 1950 to an estimated 3,139,017 in 2009 based on the California Department of Finance data. Concurrent with these substantial increases in population, the economic character of Orange County has dramatically changed over the past 50 years. The predominately rural/agricultural and residential economy of the 1950s has changed to a well-diversified commercial/industrial economy.

According to the *Orange County General Plan* (2004), in 1995 approximately 2 percent (24,581) of the County's 1.2 million jobs were located in unincorporated areas, the majority of which are located in southern Orange County. By 2020, the total number of jobs in unincorporated Orange County is projected to increase by

¹ Level of service standards are more fully explained in the Traffic and Transportation section of Chapter 2.

approximately 670 percent to approximately 190,000 jobs. In 2020, that figure will account for nearly nine percent of Orange County's total.

The Center for Demographic Research at California State University, Fullerton is responsible for preparing the Orange County Projections, which provides population, housing, and employment projections for use in local and regional planning efforts. *The Orange County Projections 2006* (OCP 2006) are the most current set of projections for the region. The demographic data is provided in five-year intervals from 2005 to 2035.

The OCP 2006 year 2035 projections provide the primary set of demographic data that is applied in the traffic analysis with the exception of the Cities of Mission Viejo, San Juan Capistrano, Laguna Niguel, and San Clemente and the unincorporated community of Ladera Ranch where General Plan land use data is applied. Those buildout land use projections are generally consistent with OCP 2006 (i.e., the differences between the General Plan and the OCP 2006 projections are minimally different). For the Rancho Mission Viejo area, the project approved by the Board of Supervisors has been assumed.

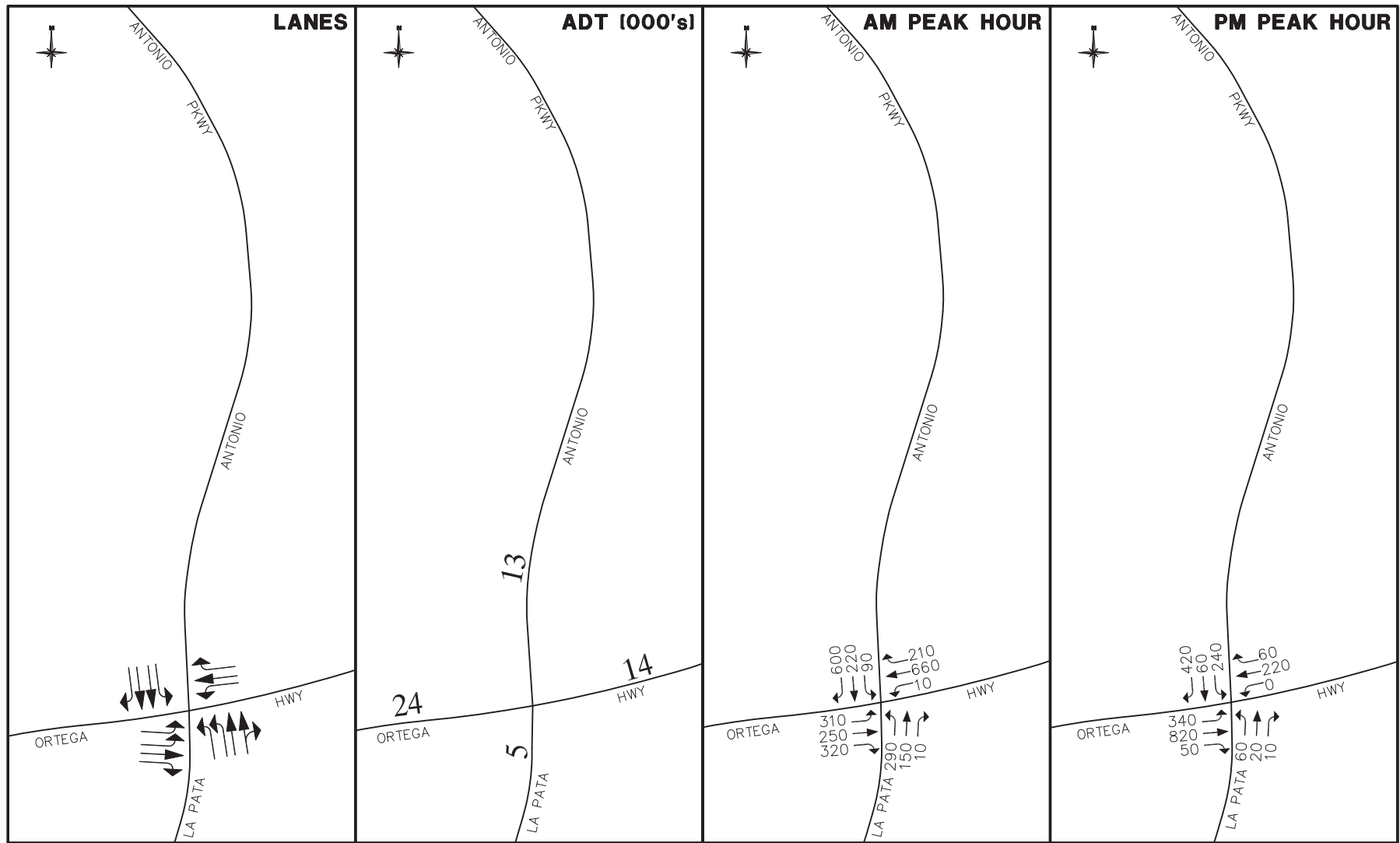
Figure 5 shows the housing and employment growth for cities and communities in the area of influence for the study area. By year 2035, south Orange County is projected to experience a 35 percent increase in housing, a 61 percent increase in employment, and a 44 percent increase in average daily traffic (ADT) demand compared to 2005.

Future Circulation and System Deficiencies

Year 2035 traffic analysis was prepared to evaluate future circulation deficiencies in the project study area. The traffic analysis assumes implementation of only those *Master Plan of Arterial Highways* (MPAH) and Regional Transportation Plan (RTP) improvements that are currently committed for the relevant time frames (2015 and 2035). This means that they are currently funded or have a funding program that will generate the necessary funds to pay for construction of the improvement. Figure 6 illustrates the 2015 committed highway network in the vicinity of the project, and the corresponding network for 2035 is shown in Figure 7. In the immediate vicinity of the study area, Cow Camp Road (the new roadway connection located between Antonio Parkway and SR-74) is not assumed to be fully built until after 2015.

The long-range analysis (year 2035) examines the committed network with and without the southern extension of SR-241 (the Foothill Transportation Corridor). The "with corridor" analysis uses a representative alignment of the corridor as illustrated in the above-referenced Figure 7. Planning for the extension of SR-241 has been ongoing since the 1980s. Though the SR-241 extension does not have completed federal environmental compliance documents, the facility is still shown on local and regional planning documents. Similarly, the analysis has been done using the assumption of "with" and "without" the La Pata Avenue extension. This project, though programmed, does not have environmental compliance documents.

Table 2 provides the intersection analysis for 2015 and 2035 without the project. There is further traffic analysis with the project presented in Chapter 2.

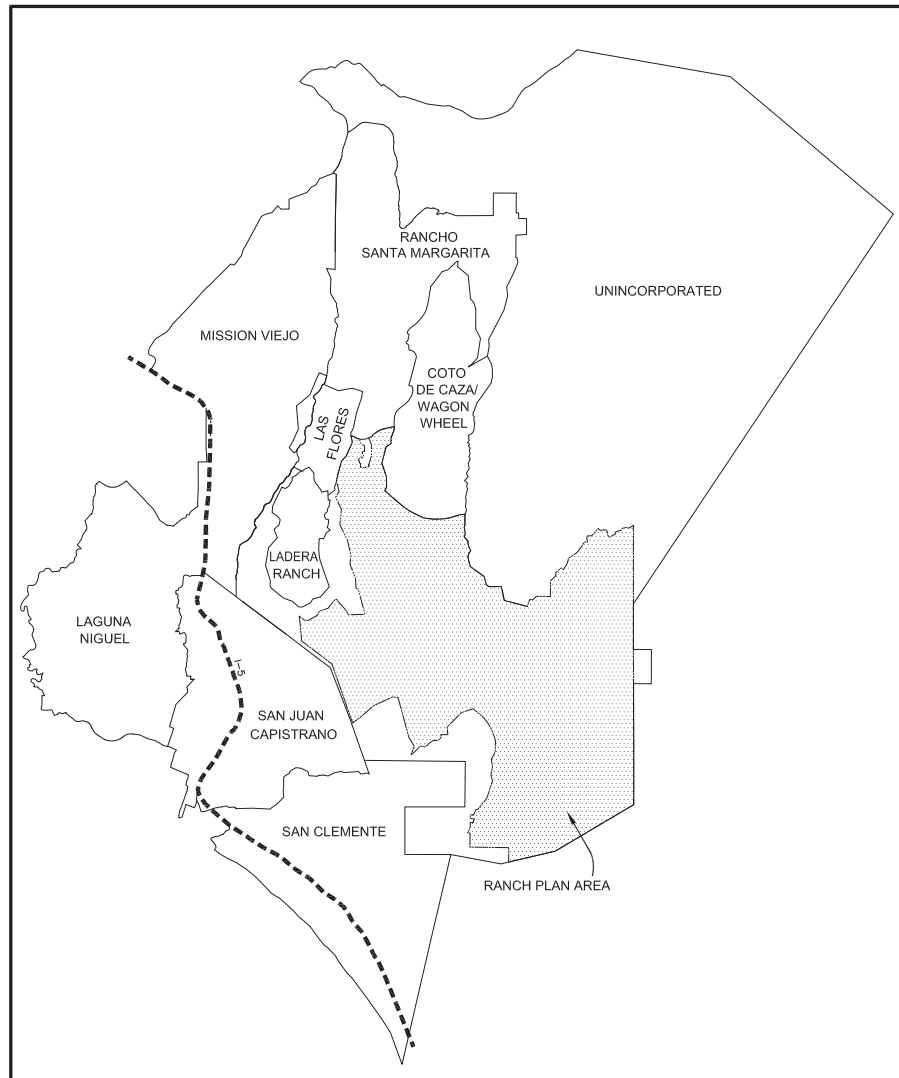


Source: Austin-Foust Associates, Inc.

Existing Roadway System and Traffic Volumes

Antonio Parkway Widening

Figure 4



City of Mission Viejo

	2005	2035	Growth
Dwelling Units	33,791	34,187	1%
Employment	36,539	38,480	5%
ADT	524,430	567,247	7%

City of San Juan Capistrano

	2005	2035	Growth
Dwelling Units	11,568	12,724	10%
Employment	16,102	19,244	20%
ADT	199,994	248,254	23%

City of Laguna Niguel

	2005	2035	Growth
Dwelling Units	24,842	25,289	2%
Employment	21,592	24,568	5%
ADT	355,981	423,974	19%

City of San Clemente

	2005	2035	Growth
Dwelling Units	24,094	25,733	7%
Employment	24,839	35,407	43%
ADT	335,000	560,349	67%

City of Rancho Santa Margarita

	2005	2035	Growth
Dwelling Units	16,949	17,072	1%
Employment	8,712	10,760	24%
ADT	206,552	257,437	25%

Ranch Plan

	2005	2035	Growth
Dwelling Units	19	14,000	--
Employment	328	16,757	--
ADT	1,325	186,129	--

Unincorporated (excluding Ranch Plan)

	2005	2035	Growth
Dwelling Units	433	3,126	622%
Employment	1,366	2,012	1%
ADT	9,039	35,982	298%

Las Flores

	2005	2035	Growth
Dwelling Units	1,839	1,852	<1%
Employment	458	529	15%
ADT	18,374	19,154	4%

Coto De Caza/Wagon Wheel

	2005	2035	Growth
Dwelling Units	4,053	5,340	32%
Employment	921	1,171	22%
ADT	46,064	60,600	31%

Ladera Ranch

	2005	2035	Growth
Dwelling Units	961	8,100	--
Employment	11	2,613	--
ADT	8,023	91,909	--

Grand Total

	2005	2035	Growth
Dwelling Units	118,549	147,423	24%
Employment	110,968	151,541	37%
ADT	1,704,782	2,451,035	44%

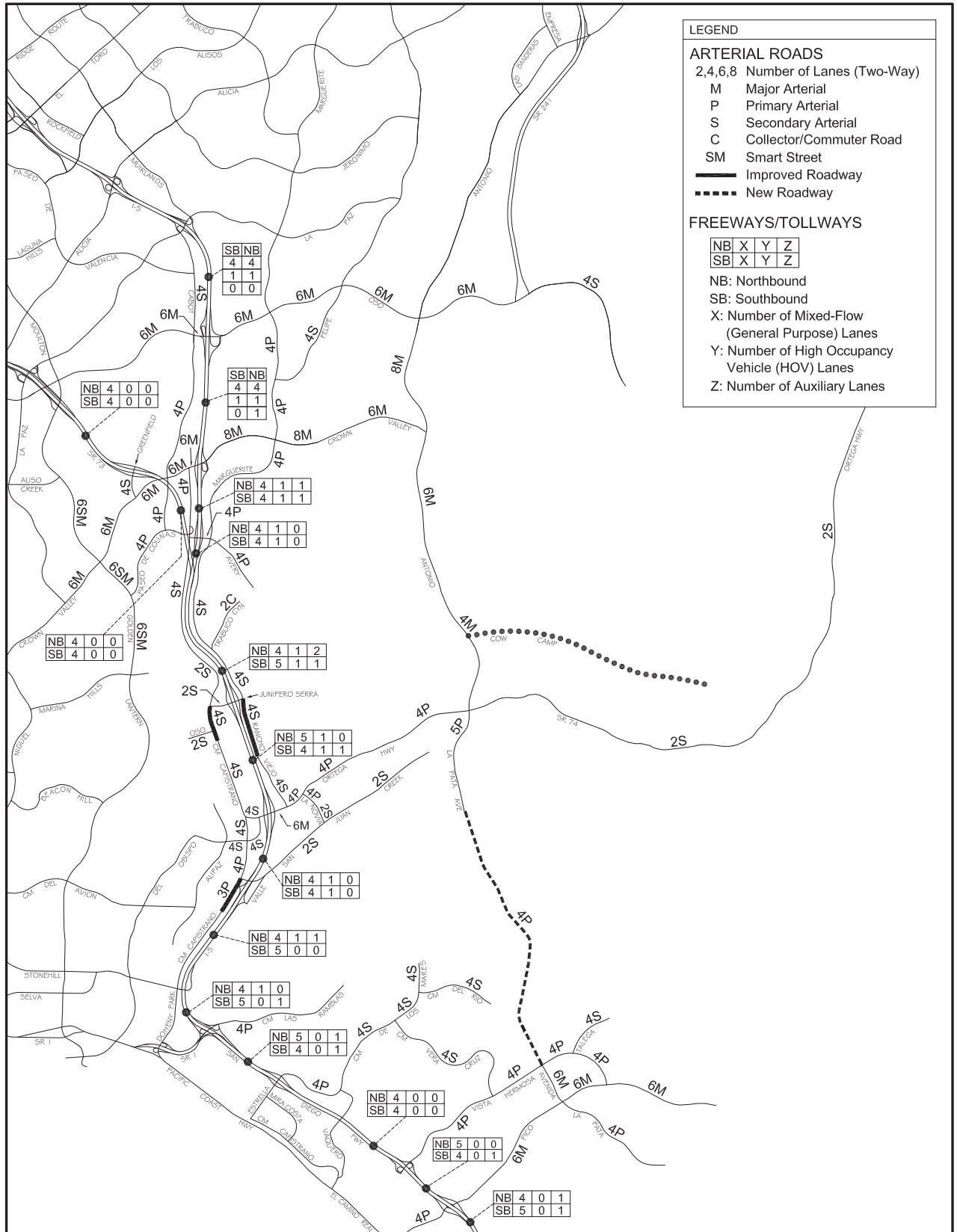
Source: Austin-Foust Associates, Inc.

Projected Housing and Employment Growth Within the Project Area

Figure 5

Antonio Parkway Widening





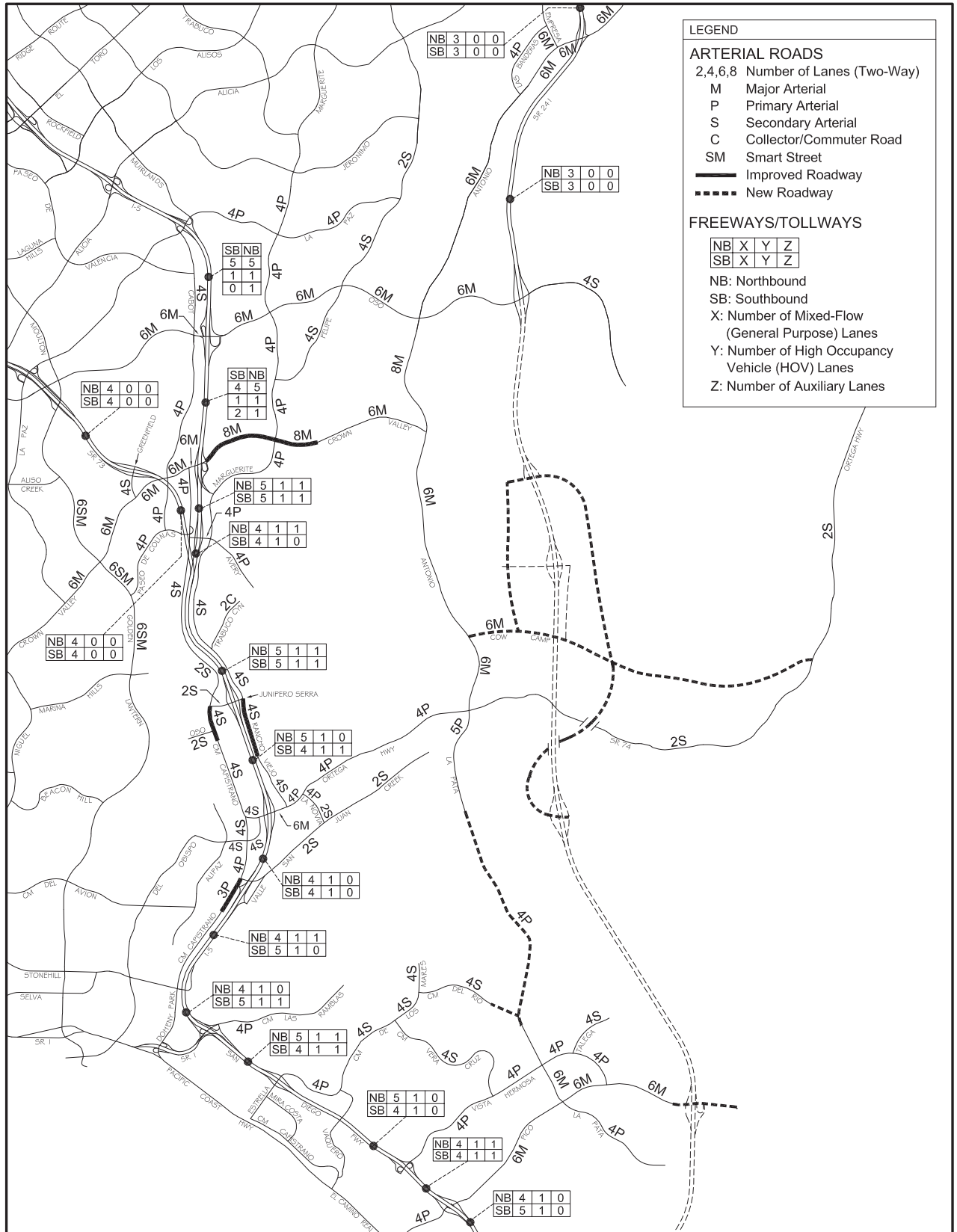
Source: Austin-Foust Associates, Inc.

Year 2015 Committed Highway Network

Figure 6

Antonio Parkway Widening





Source: Austin-Foust Associates, Inc.

Year 2035 Committed Highway Network

Figure 7

Antonio Parkway Widening



Table 2
Future Intersection Level of Service Summary
(Years 2015 and 2035)

Intersection	Without Project			
	AM Peak Hour		PM Peak Hour	
	ICU	LOS	ICU	LOS
ICUS				
2015, Without La Pata Extension				
Antonio Pkwy and "C" St	0.50	A	0.52	A
Antonio Pkwy and Cow Camp Rd	0.47	A	0.49	A
Antonio Pkwy and Ortega Hwy	0.65	B	0.54	A
2015, With La Pata Extension				
Antonio Pkwy and "C" St	0.68	B	0.74	C
Antonio Pkwy and Cow Camp Rd	0.80	C	0.83	D
Antonio Pkwy and Ortega Hwy	0.69	B	0.80	C
2035, Without SR-241 Extension				
Antonio Pkwy and "C" St	0.83	D	0.80	C
Antonio Pkwy and Cow Camp Rd	0.94	E	1.06	F
Antonio Pkwy and Ortega Hwy	0.98	E	0.99	E
2035, With SR-241 Extension				
Antonio Pkwy and "C" St	0.92	E	0.79	C
Antonio Pkwy and Cow Camp Rd	0.89	D	0.93	E
Antonio Pkwy and Ortega Hwy	0.74	C	0.78	C
HCM DELAY				
2015, Without La Pata Extension				
Antonio Pkwy and Ortega Hwy	28.9	C	22.4	C
2015, With La Pata Extension				
Antonio Pkwy Ortega Hwy	31.0	C	40.7	D
2035, Without SR-241 Extension				
Antonio Pkwy and Ortega Hwy	69.5	E	68.1	E
2035, With SR-241 Extension				
Antonio Pkwy and Ortega Hwy	40.0	D	34.1	C
Source: Austin Foust Associates 2009.				

Modal Interrelationships and System Linkages

Antonio Parkway is located approximately 2.5 miles east of Interstate (I) 5 and provides the only direct route between the communities of Ladera Ranch, Mission Viejo, Rancho Santa Margarita and San Juan Capistrano. Due to the delay in the construction of the extension of State Route (SR) 241, Antonio Parkway serves both local and regional traffic demands in the area. As a result of the hilly terrain in this portion of south Orange County, most of the roadways do not provide effective connection between the communities.

Antonio Parkway serves an above average number of trucks because La Pata Avenue is the only access point to the Prima Deshecha Landfill. The percentage of trucks is expected to increase because, with the planned expansion, the landfill is projected to process more than double the amount of solid waste per day. After 2015, the landfill will no longer be accepting solid waste material from San Diego County, so most of the truck volumes will be to and from the north.

Antonio Parkway attracts trips from Riverside County because of its connection with SR-74. SR-74 is the only route in south Orange County that provides a connection with Riverside County to the east. Trips from Riverside County wanting to access southeast Orange County utilize Antonio Parkway to go to employment centers in Rancho Santa Margarita.

Independent Utility and Logical Termini

Federal Highway Administration (FHWA) regulations (23 CFR 771.111 [f]) require that the action evaluated:

1. Connect logical termini and be of sufficient length to address environmental matters on a broad scope;
2. Have independent utility or independent significance (be usable and be a reasonable expenditure even if no additional transportation improvements in the area are made); and
3. Not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.

The Antonio Parkway project meets these criteria. The project addresses the final improvements necessary to bring Antonio Parkway up to full arterial standards through its intersection with SR-74. Though future improvements are proposed on La Pata Avenue to the south of the project limits, no further improvements are required to allow Antonio Parkway to fully function. The widening of Antonio Parkway would improve the existing level of service and help meet the future demand for north-south travel.

Legislation

There is no legislation specific to Antonio Parkway.

PROJECT DESCRIPTION

Alternative Development Process

Previous Roadway Alignment Study (1995 Alignment Study)

In conjunction with the route alignment study in 1995, five alignment alternatives and the No Build alternative for Antonio Parkway were evaluated. The study area in 1995 extended beyond the limits of the current project because it was establishing the alignment for Antonio Parkway from the Las Flores Planned Community boundary (south of Oso Parkway) to SR-74. This was a distance of approximately five miles. Since 1995 the majority of the alignment selected for Antonio Parkway has been built out to full arterial standards. Therefore, the proposed improvements focus only on widening a small segment of the roadway. Though alignment alternatives are not an option at this time because the roadway has been built, the following information on the various alignment alternatives that were considered is provided to provide information on how the alignment alternative was selected. In addition to alignment alternatives, the 1995 study also evaluated the use of tolls on Antonio Parkway. The 1995 alignment alternatives are depicted in Figure 8 and are briefly described below. The reference to the impacts associated with each of the alignment alternatives is based on data in FEIR 555, prepared pursuant to CEQA.

- **Primary Alignment.** The primary alignment evaluated in the FEIR 555 and ultimately selected by the Orange County Board of Supervisors was a 4.5-mile segment that initiated approximately 900 feet south of Oso Parkway. Within the Las Flores Planned Community an approximately 350-foot long bridge spanned a ravine to serve as a wildlife crossing. Just south of the wildlife crossing the roadway curved to the west to avoid a rugged topography, thereby eliminating the need for a large buttress. The alignment then curved to the east and continued in a southerly direction, crossing the then proposed Crown Valley Parkway. The roadway traversed the western boundary of an existing San Diego Gas and Electric substation easement. The alignment continued in a southerly direction crossing over an access road to the Chiquita Wastewater Reclamation Plant, located to the east of the project site. A 735-foot long bridge over San Juan Creek was designed to span the 100-year floodplain. A maximum six-percent grade was assumed. The improvements would be phased; however, ultimate grading would be done as part of construction of the initial roadway section.
- **Alternative 1: Valley Roadway Alignment.** The valley alignment was planned to traverse the central valley of the Ladera Ranch Planned Community. The alignment would have been approximately 5.25 miles in length. Initial assessment of this alignment found it to be infeasible due to high costs associated with drainage, landslides, and remedial earthwork. As such, no further analysis of this roadway alternative was conducted.
- **Alternative 2: Western Roadway Alignment.** The western alignment was planned to traverse the western portion of the Ladera Ranch Planned Community and be approximately 5.61 miles in length. The western alignment would have required substantially more mass excavation and remedial earthwork than the alignment selected by the Board of Supervisors in 1995. In addition, the alignment would have required more mitigation for

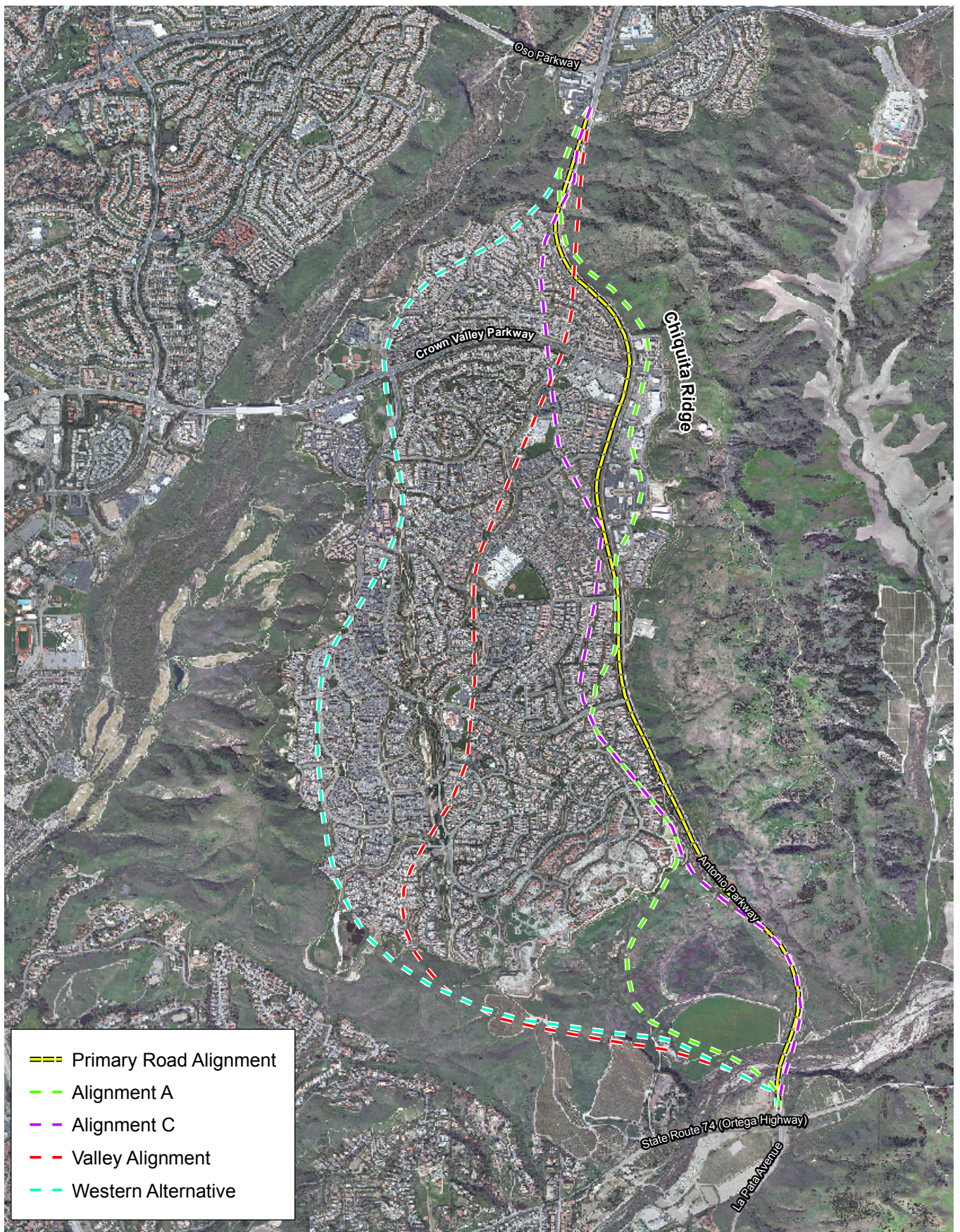
potential hydrology impacts. As a result, the western alignment would have been more complex and costly to construct than the selected alignment. Potential impacts of this alignment related to geology and soils, hydrology, air quality, public health and safety, and existing public utility infrastructure were greater than those associated with the selected alignment. As with the selected alignment, this alignment would have impacts with respect to landform and topography alterations, traffic, air quality (i.e., construction emissions and long-term mobile sources), water quality, and the removal of small amounts of prime farmland.

- **Alternative 3: Eastern Roadway Alignment A.** Alignment A is one of two easterly alignments that was considered for Antonio Parkway and would have been approximately 4.75 miles in length. Alignment A was evaluated at both 6 and 8 percent grade. The northern and central portions of Alignment A lie generally east of the selected alignment; in the southern portion, Alignment A follows a route that is west of the primary alignment. The alignment would have required substantially more mass excavation and remedial earthwork than the primary alignment, and would have greater impacts on biological resources, existing utility infrastructure, air quality, and public health and safety. The selected alignment was found to be superior to Alignment A due to costs, extent of grading, and engineering complexity.
- **Alternative 4: Eastern Roadway Alignment C.** Alignment C is the second of two easterly alignment alternatives considered for this project and is approximately 4.55 miles in length. As with Alignment A, this alignment was evaluated at both 6 and 8 percent vertical grade maximum standards. The 6 percent grade alternative was included to meet County arterial highway standards; the 8 percent grade was evaluated to determine if this variance reduced the amount of grading and, therefore, the cost of this alignment. Alignment C (6 and 8 percent grades) would have required substantially more mass excavation than the selected alignment. Other impacts associated with the alignment were generally the same as those resulting from the selected alignment.
- **Alternative 5: No Roadway Project Alternative.** The no roadway project alternative assumed that the extension of Antonio Parkway from its existing terminus to SR-74 as shown on the MPAH would not be constructed. The no roadway project alternative would have resulted in fewer environmental impacts than the construction of the selected alignment. However, this alternative would not have been consistent with the General Plan and would have resulted in substantial traffic impacts. This alternative did not meet the objectives of the proposed project.

Proposed Alternative Improvements

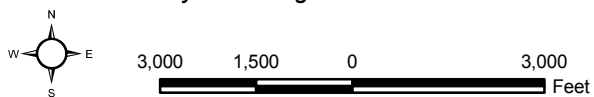
As previously indicated, the initial four lanes of Antonio Parkway in the project study area were constructed in 1998 based on the alignment selected by the Orange County Board of Supervisors in 1995. At that time, grading for the full six lanes was completed. As part of the current process, evaluation of different alignment alternatives would not be reasonable because the roadway has been built. Based on the selected alignment, open space conservation easements have been recorded along Chiquita Ridge, adjacent to the northeastern portion of the roadway.

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Alignment Alternatives Evaluated in 1995 Route Alignment Study Figure 8

Antonio Parkway Widening



In certain locations the footprint for the currently proposed improvements does exceed the footprint evaluated in 1995. This is a result of updated traffic data utilizing the currently approved land uses. To optimize traffic operations, additional turn lanes have been provided to accommodate future arterial highway intersections and planned land uses that were not approved in 1995. These traffic operation improvements have been incorporated into project design without resulting in substantially greater environmental impacts.

The County of Orange, the local jurisdiction with ownership of the facility, has prepared a Project Report² and prepared environmental documentation pursuant to the California Environmental Quality Act. After comparing and weighing the benefits and impacts of all of the feasible alternatives the County of Orange has identified the Build Alternative as the locally preferred alternative. As discussed below, subsequent to the public review and comment period, the Department concurred with this determination when selecting the preferred alternative.

Build Alternative (Preferred Alternative)

The project proposes to widen the existing Antonio Parkway for an approximate 1.4-mile segment within unincorporated Orange County, California. The Project limits begin at approximately 2,000 feet south of the intersection at Covenant Hills Drive (the southern boundary of the Ladera Ranch Planned Community) and extend approximately 7,900 feet (1.4 miles) south. This would extend the improvements approximately 900 feet south of the intersection with State Route 74 (SR-74), which is known locally as Ortega Highway. Extending the improvements through the intersection is required to facilitate traffic operations and to provide for a safe transition to the existing lane configuration on La Pata Avenue. The improvements would utilize the existing roadway centerline, profile, and standard superelevation rates. Also, the project will utilize ultimate grading that was included with the prior roadway construction project

A Project Report was prepared and the County of Orange approved the proposed project in December 2008. The Project Report includes the following elements: Geometric Approval Drawings, Hydrology and Hydraulics Report, Water Quality Management Plan Roadway BMP Plan, Geotechnical Overview, Bridge Widening Type Selection Report, and environmental documents prepared pursuant to CEQA and permits issued by wildlife and regulatory agencies.

Roadway Geometrics

The typical proposed roadway width would be 102 feet between curbs and a total of 120 feet of roadway right-of-way. This widening would allow for 3 lanes of traffic in each direction (13-foot, 12-foot, and 11-foot lanes) and a 14-foot-wide raised median. Additionally, 8-foot-wide bikeway/shoulders and a 6-foot-wide curb-adjacent or 5-foot-wide meandering sidewalks would be provided on both sides of the street. Parkways would vary between 11 and 25 feet in width. See Figures 9a through 9d for the Standard Cross Sections that apply to the project.

A new 40.25-foot-wide bridge would be constructed over San Juan Creek. The new bridge, combined and joined with the existing bridge, would provide sufficient width

² The Project Report is an engineering document that has been prepared to County of Orange standards.

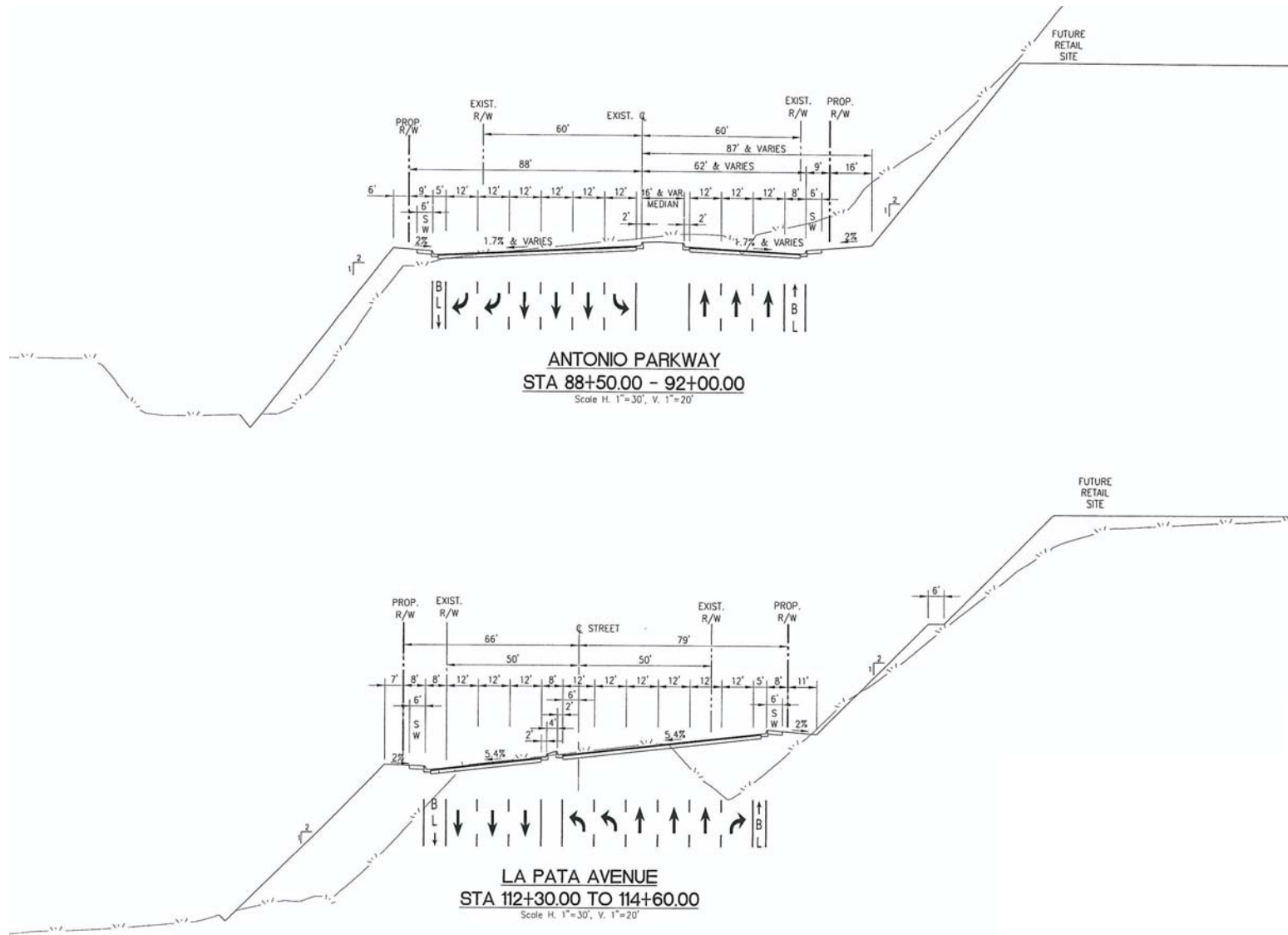
to allow for three southbound lanes, one southbound left-turn lane, a four-foot-wide raised median, and three northbound lanes. There would be eight-foot shoulders and five-foot sidewalks on both sides of the roadway. The design would be a cast-in-place, pre-stressed, continuous concrete box girder that would match the existing bridge superstructure. The proposed bridge span configuration would match the existing bridge spans and would be a total of 776 feet long. Figures 10a through 10h provide the Conceptual Project Plans.

At several locations, the cross-section for Antonio Parkway would be widened to accommodate turning lanes. These locations reflect approved land use plans. Turn lanes would be provided at the following locations:

- A left-turn lane and two right-turn lanes would be provided at the north leg of the intersection at State Route (SR) 74 for the southbound direction.
- A northbound right-turn lane and southbound left-turn lane would be provided at "D" Street. This future roadway would be located south of the San Juan Creek Bridge and would provide access to a future commercial retail site for Tentative Tract No. 17054 on the northeastern corner of the SR-74/Antonio Parkway intersection. The raised median opening on Antonio Parkway at this location would be designed to allow only southbound left-turn movements. Westbound left turns out of the parcel would be prohibited.
- Two southbound left-turn lanes and a northbound right-turn lane would be provided at the future Cow Camp Road intersection.
- North of Cow Camp Road, the Antonio Parkway intersection at the future "C" Street would have two northbound through lanes with a single northbound shared through and right-turn lane. In the southbound direction it would have three through lanes and a right-turn lane. Left-turn lanes would be provided for both the northbound and southbound directions.

South of SR-74, Antonio Parkway becomes La Pata Avenue. Improvements are currently under construction on SR-74 and affect the Antonio Parkway/La Pata Avenue/SR-74 intersection. As part of the Antonio Parkway Widening Project, no modifications to SR-74, other than striping adjustments immediately north and south of the intersection would be necessary because the design for SR-74 has incorporated the ultimate cross-section for Antonio Parkway/La Pata Avenue. The Antonio Parkway cross-section immediately north of SR-74 would consist of:

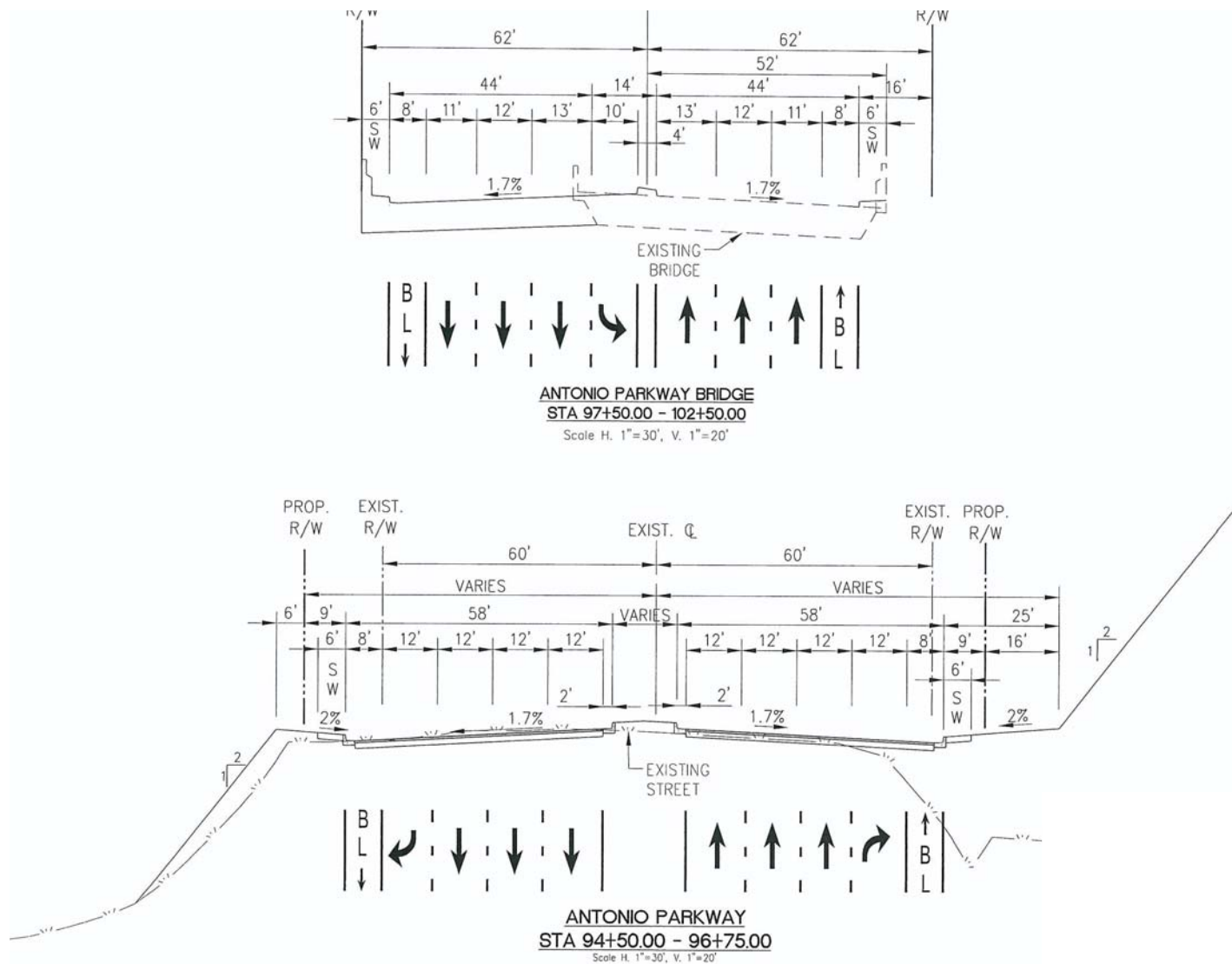
- 6 southbound lanes (1 left-turn lane, 3 through lanes, and 2 right-turn lanes);
- A variable and approximate 24-foot-wide median;
- 3 northbound lanes;
- An 8-foot-wide shoulder on the northbound side, including provision for a bike lane;
- A 5-foot shoulder on the southbound side, including provision for a bike lane;
- A proposed 25-foot-wide parkway for the northbound side; and



Standard Cross Section

Antonio Parkway Widening

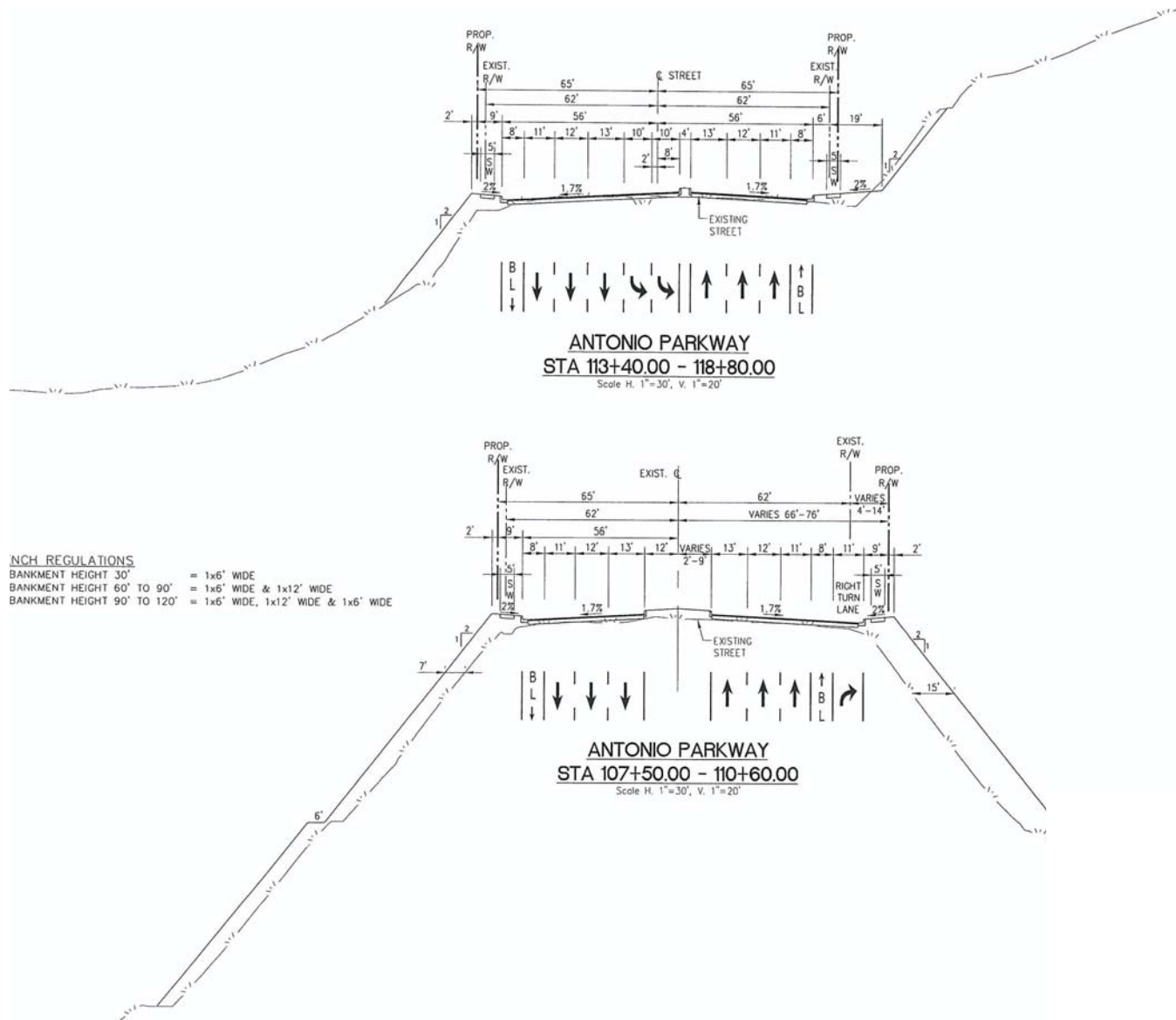
Figure 9a



Standard Cross Section

Antonio Parkway Widening

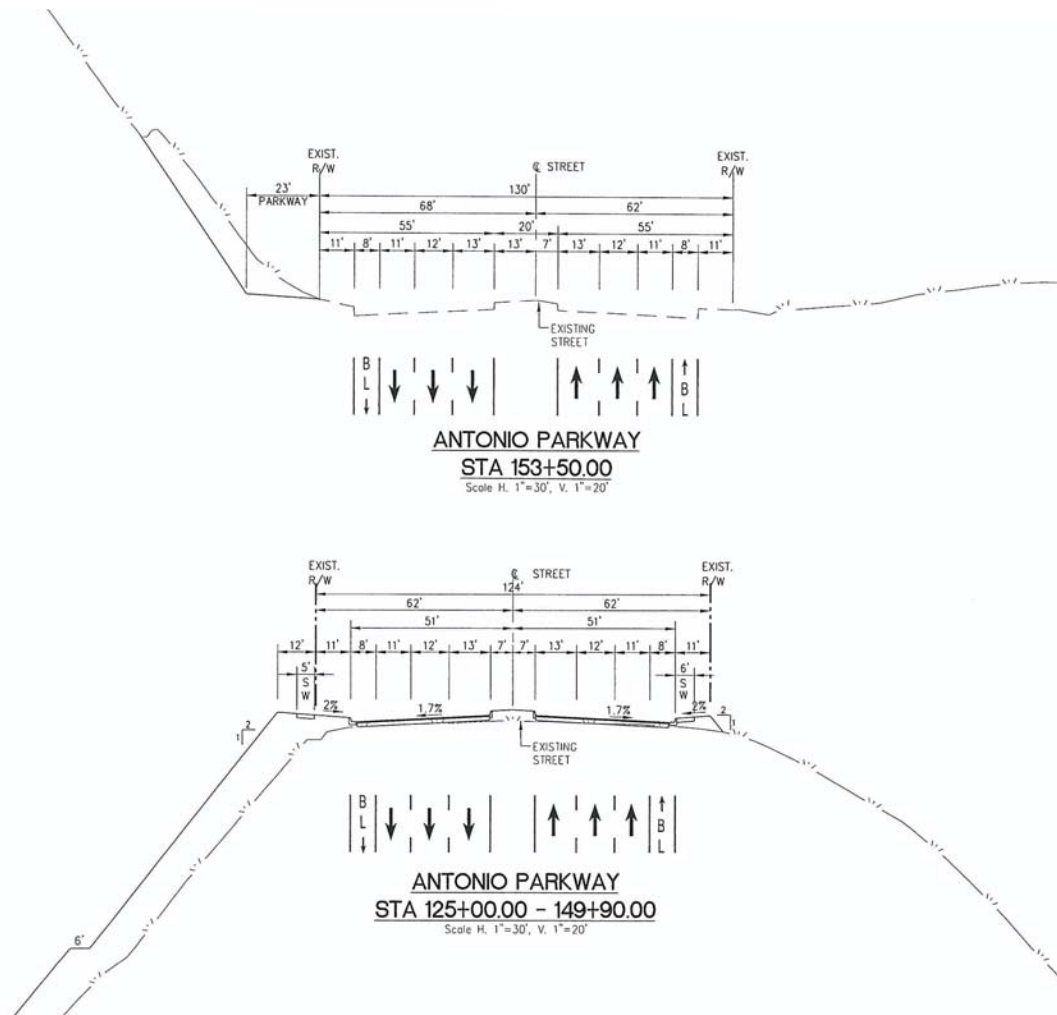
Figure 9b



Standard Cross Section

Antonio Parkway Widening

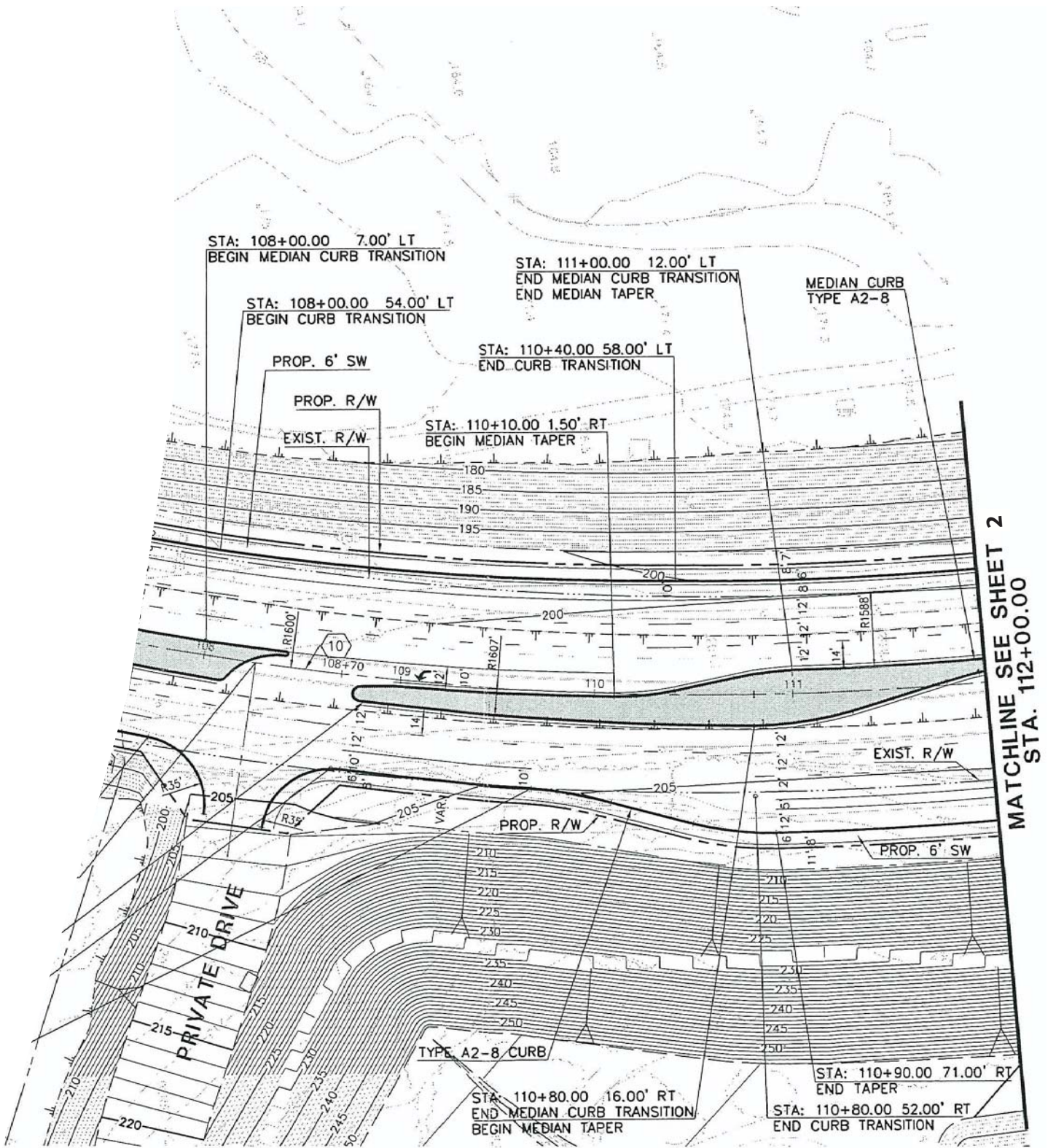
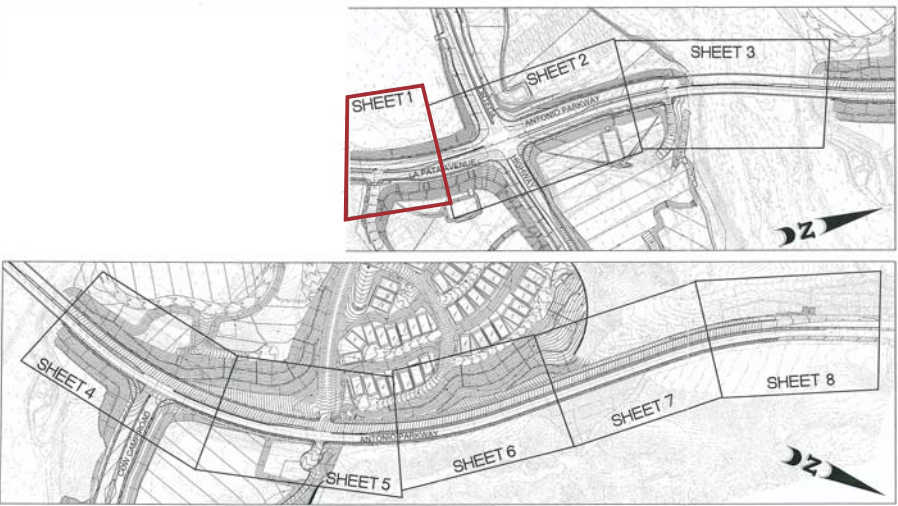
Figure 9c



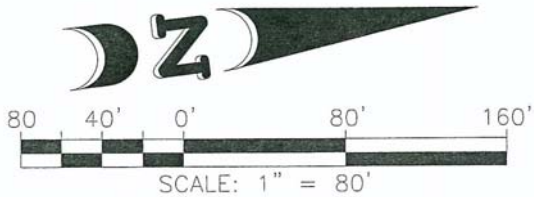
Standard Cross Section

Antonio Parkway Widening

Figure 9d



CL CURVE / LINE DATA				
NO	DELTA/BEARING	RADIUS	LENGTH	TANGENT
9	N36°03'59"E	—	457.91	—
10	40°47'19"	1600.00	1139.03	594.85



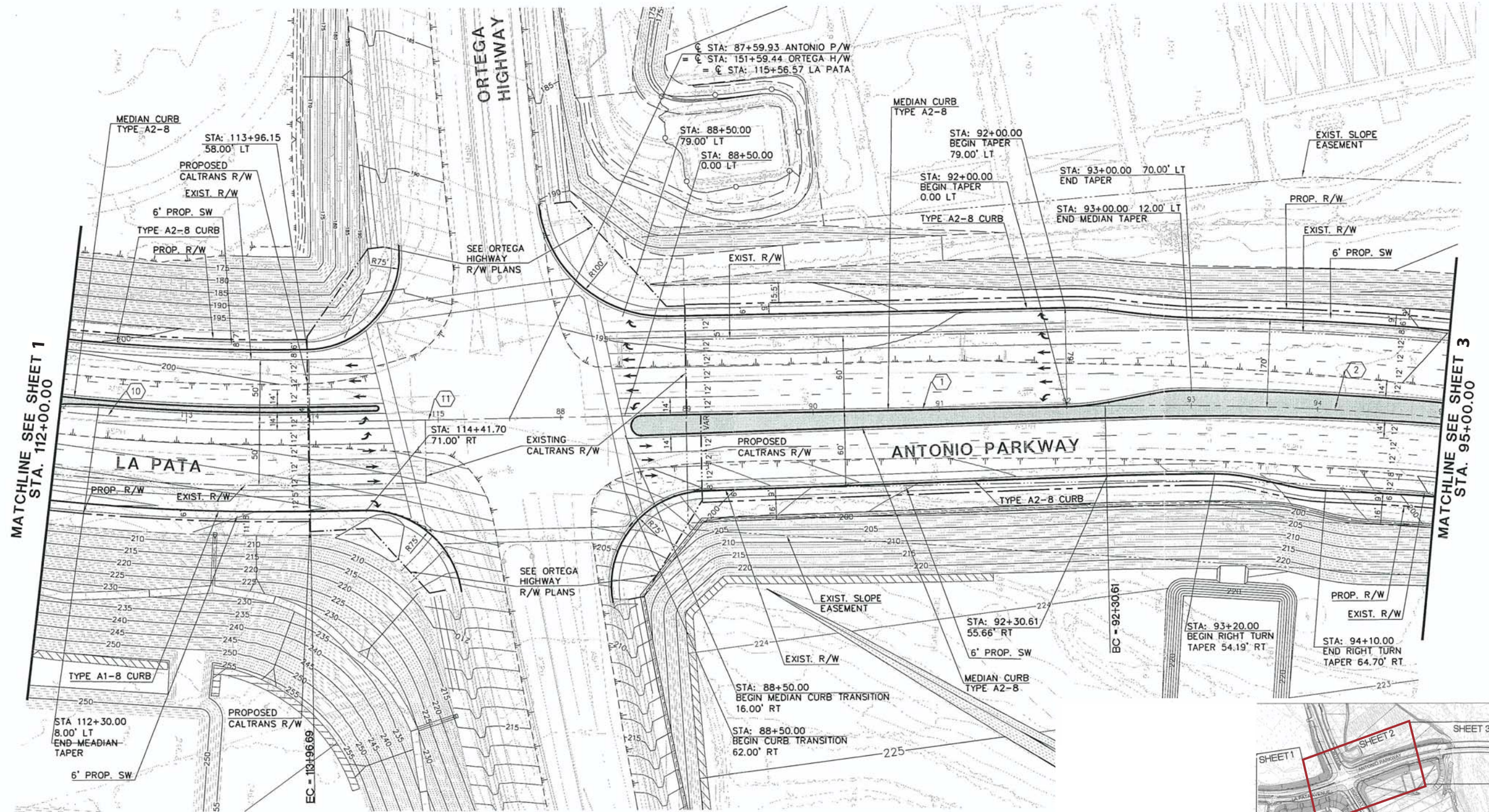
Conceptual Project Plans

Antonio Parkway Widening

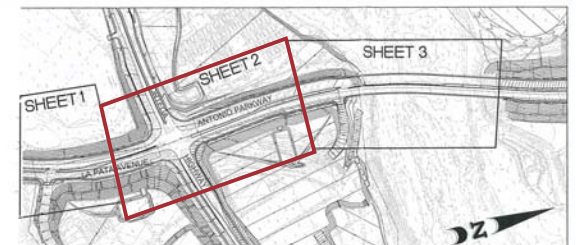
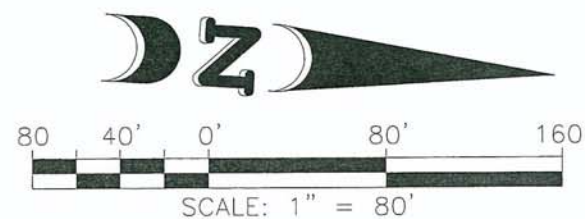
Source: Huitt Zollars 2008

Figure 10a

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CL CURVE / LINE DATA				
NO	DELTA/BEARING	RADIUS	LENGTH	TANGENT
1	N04°43'20"W	-	470.68	-
2	23°53'57"	2350.00	980.23	497.35
10	40°47'19"	1600.00	1139.03	594.85
11	N04°43'20"W	-	159.89	-



Conceptual Project Plans

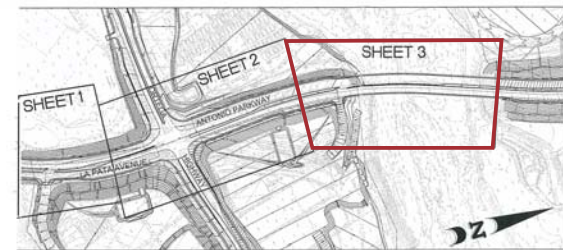
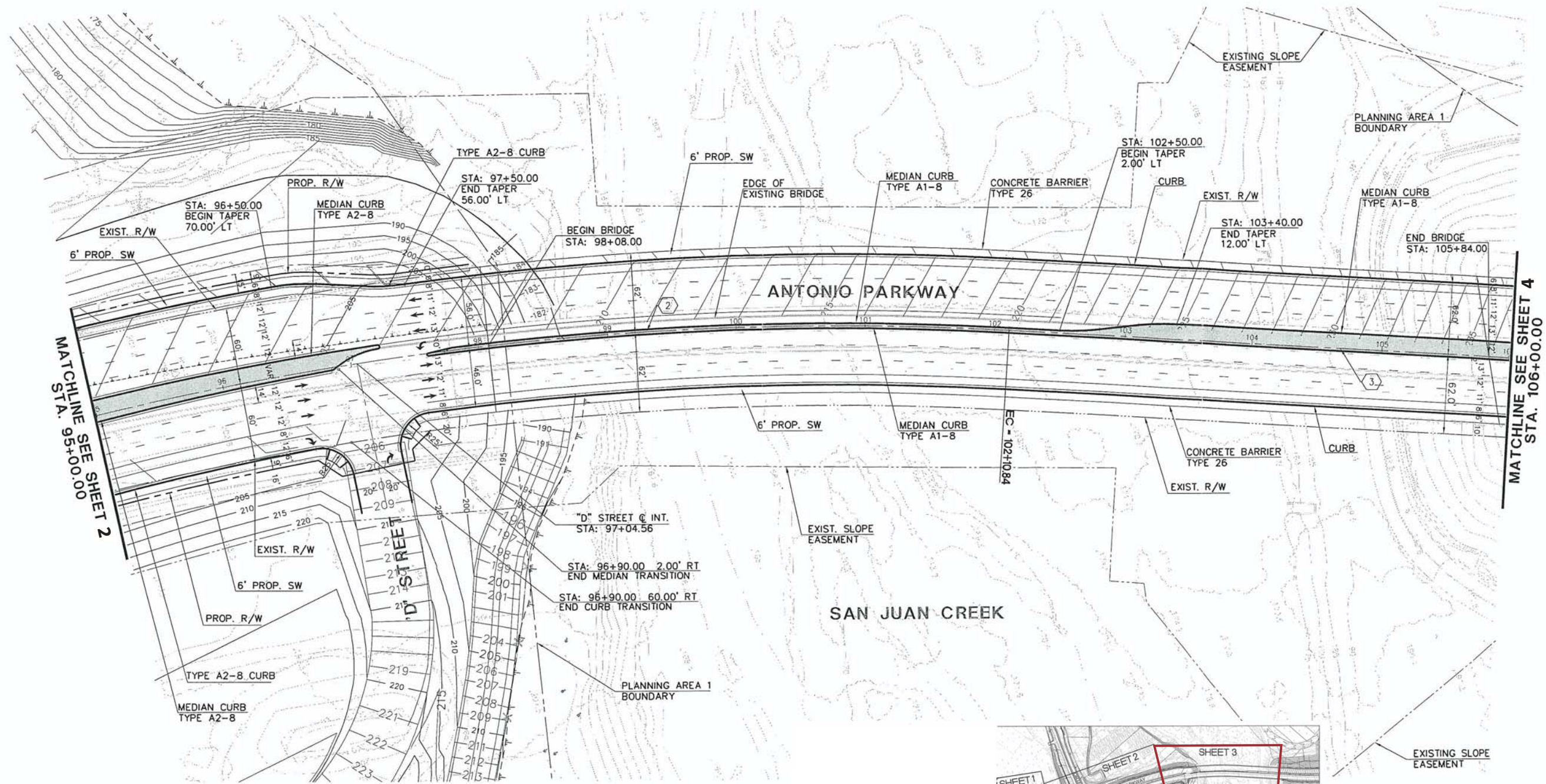
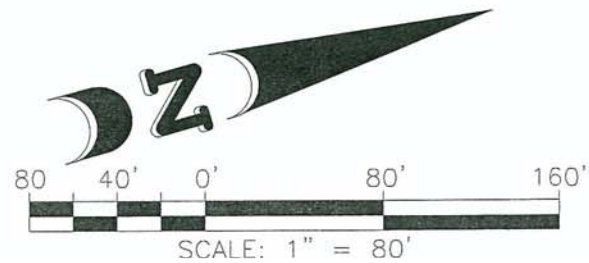
Antonio Parkway Widening

Source: Huitt Zollars 2008

Figure 10b

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CL CURVE / LINE DATA				
NO	DELTA/BEARING	RADIUS	LENGTH	TANGENT
2	23°53'57"	2350.00	980.23	497.35
3	N19°10'37"E	-	495.07	-

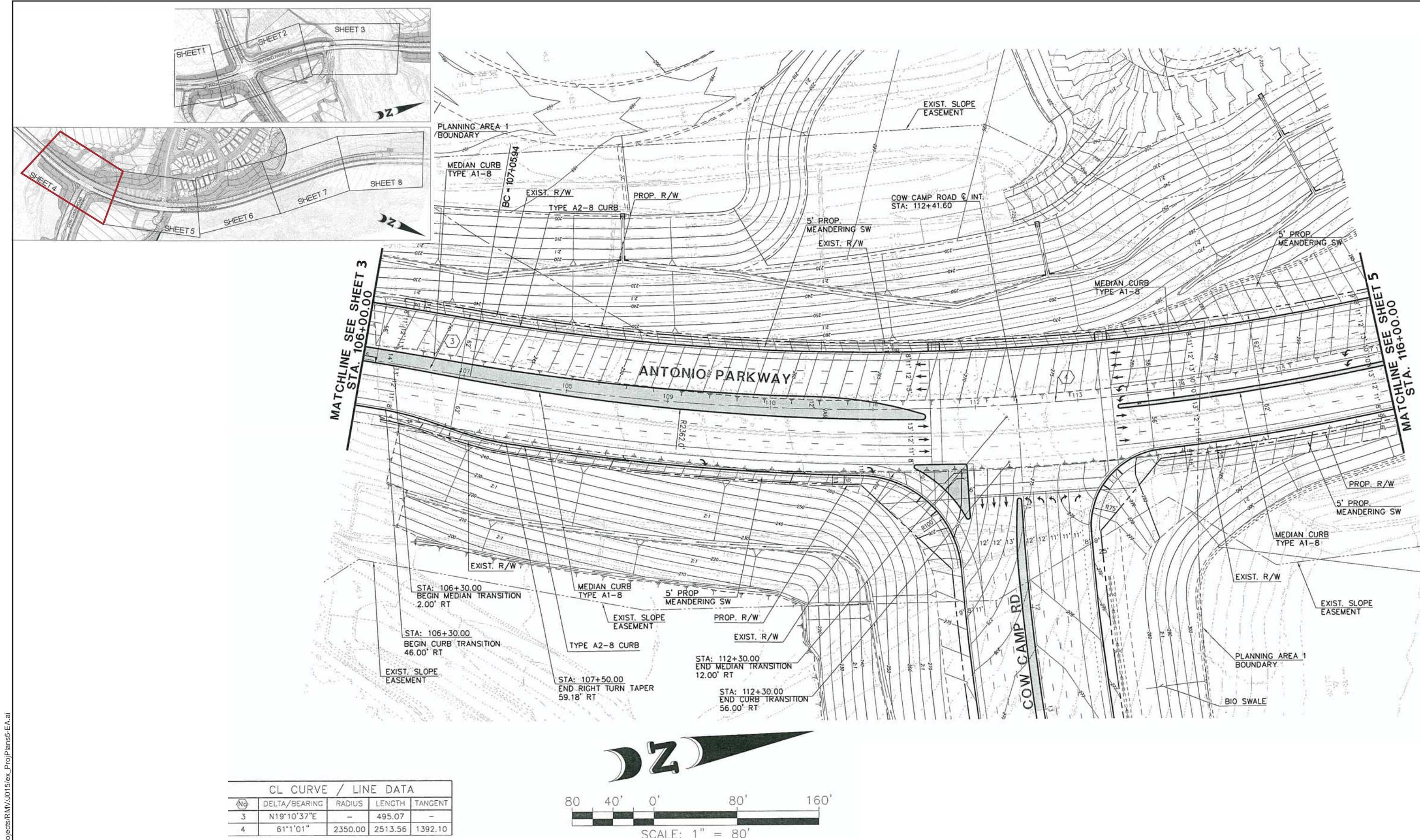


Conceptual Project Plans

Antonio Parkway Widening

Source: Huitt Zollars 2008

Figure 10c



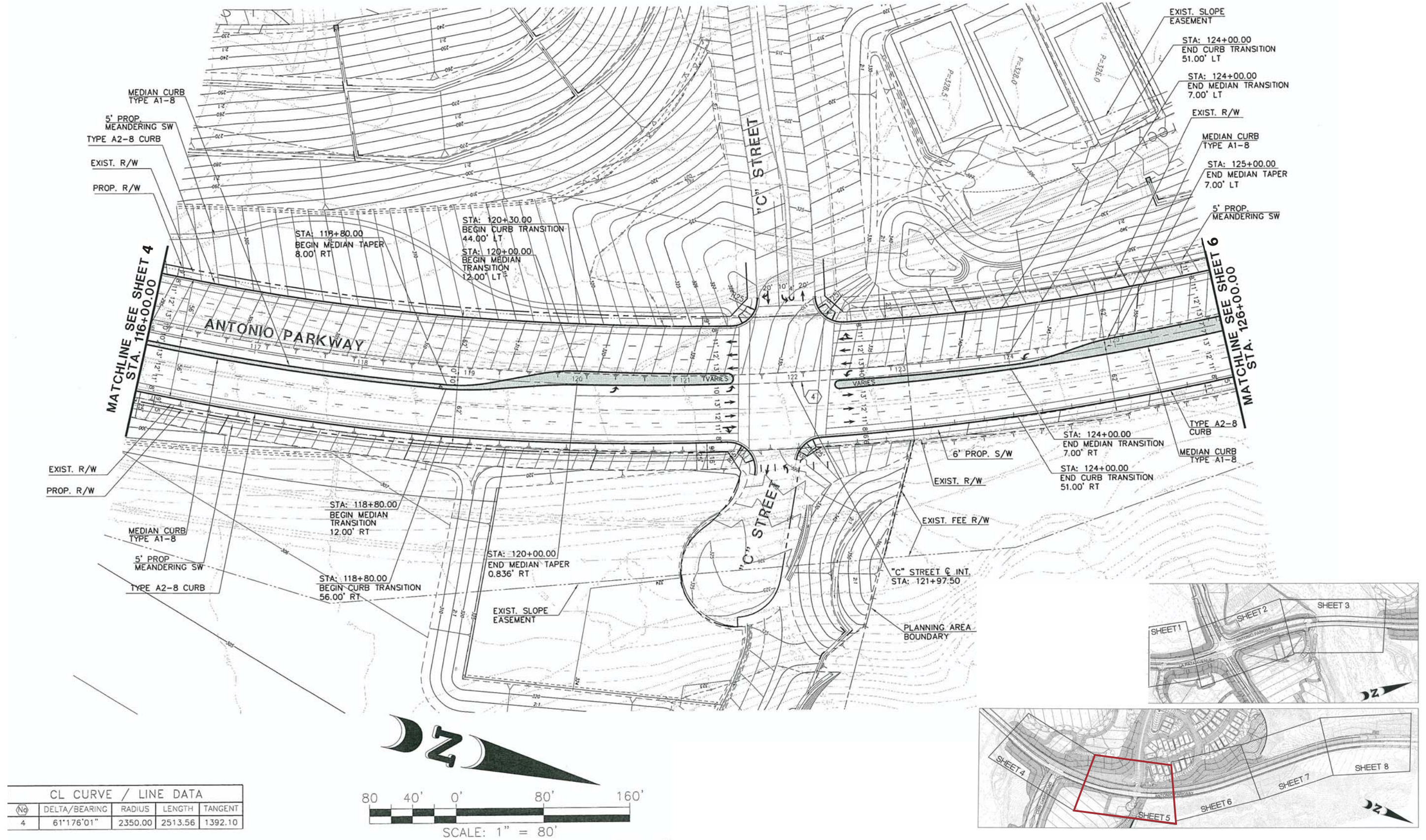
Conceptual Project Plans

Antonio Parkway Widening

Source: Huitt Zollars 2008

Figure 10d

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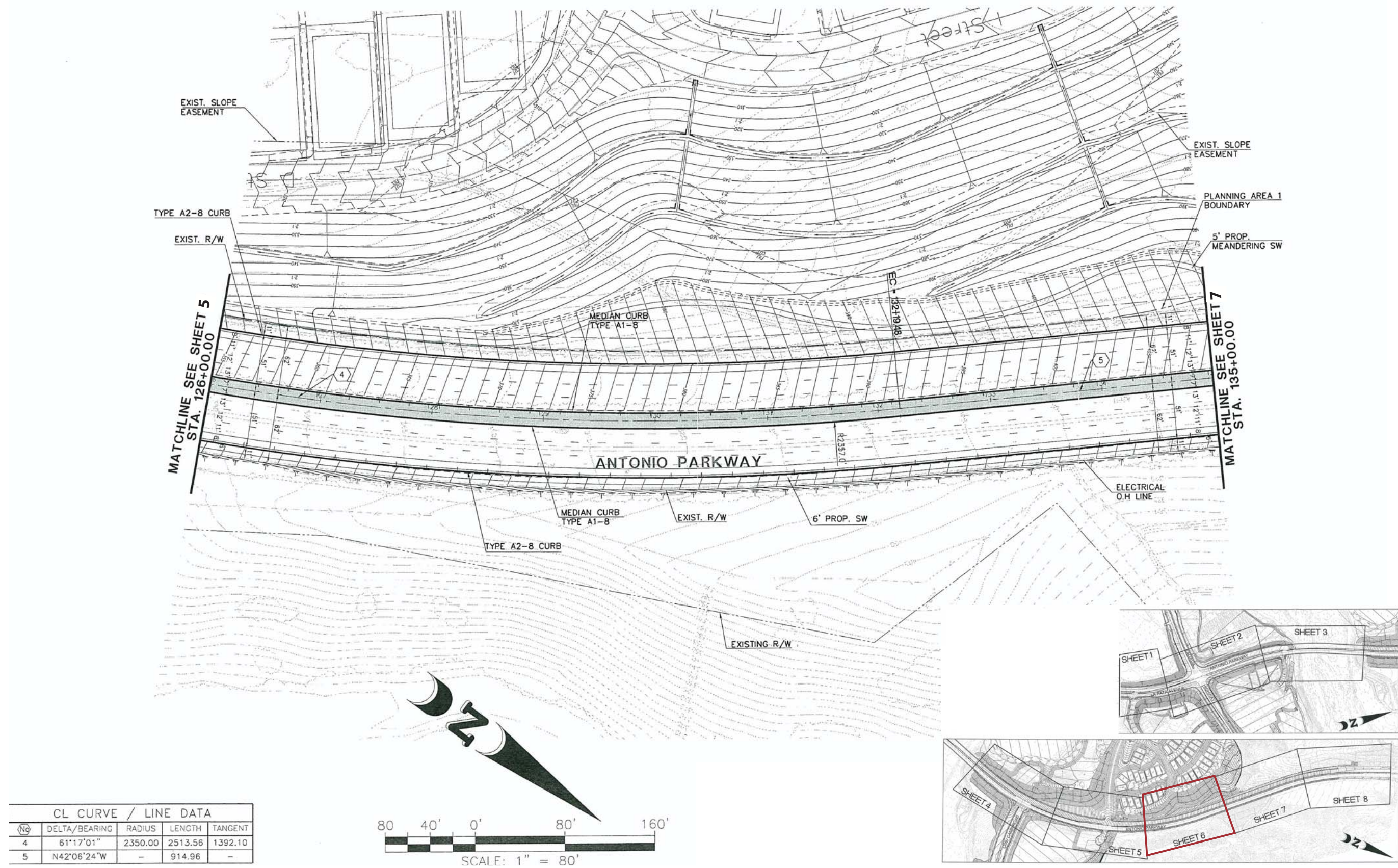
Conceptual Project Plans

Antonio Parkway Widening

Source: Huitt Zollars 2008

Figure 10e

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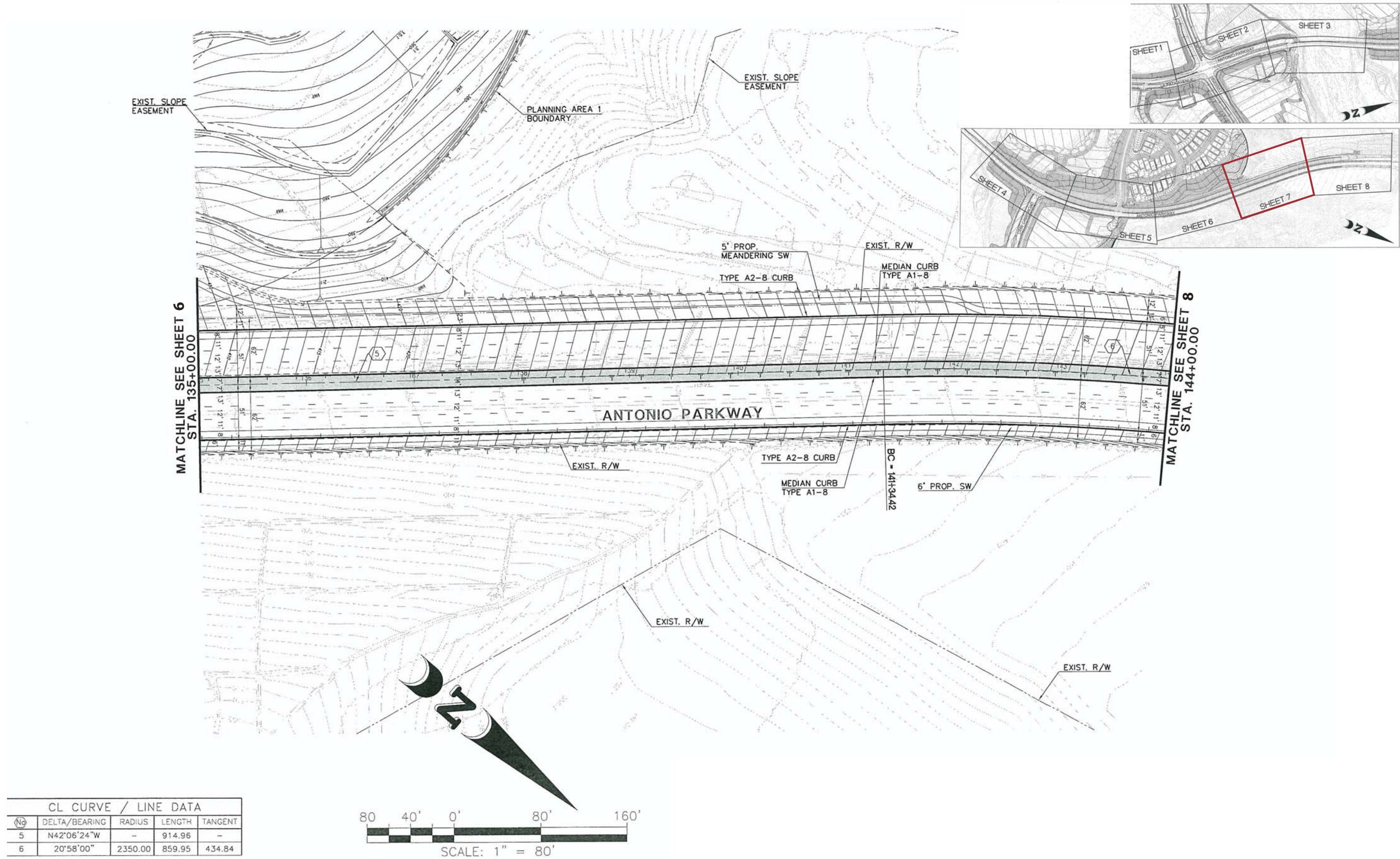
Conceptual Project Plans

Antonio Parkway Widening

Source: Huitt Zollars 2008

Figure 10f

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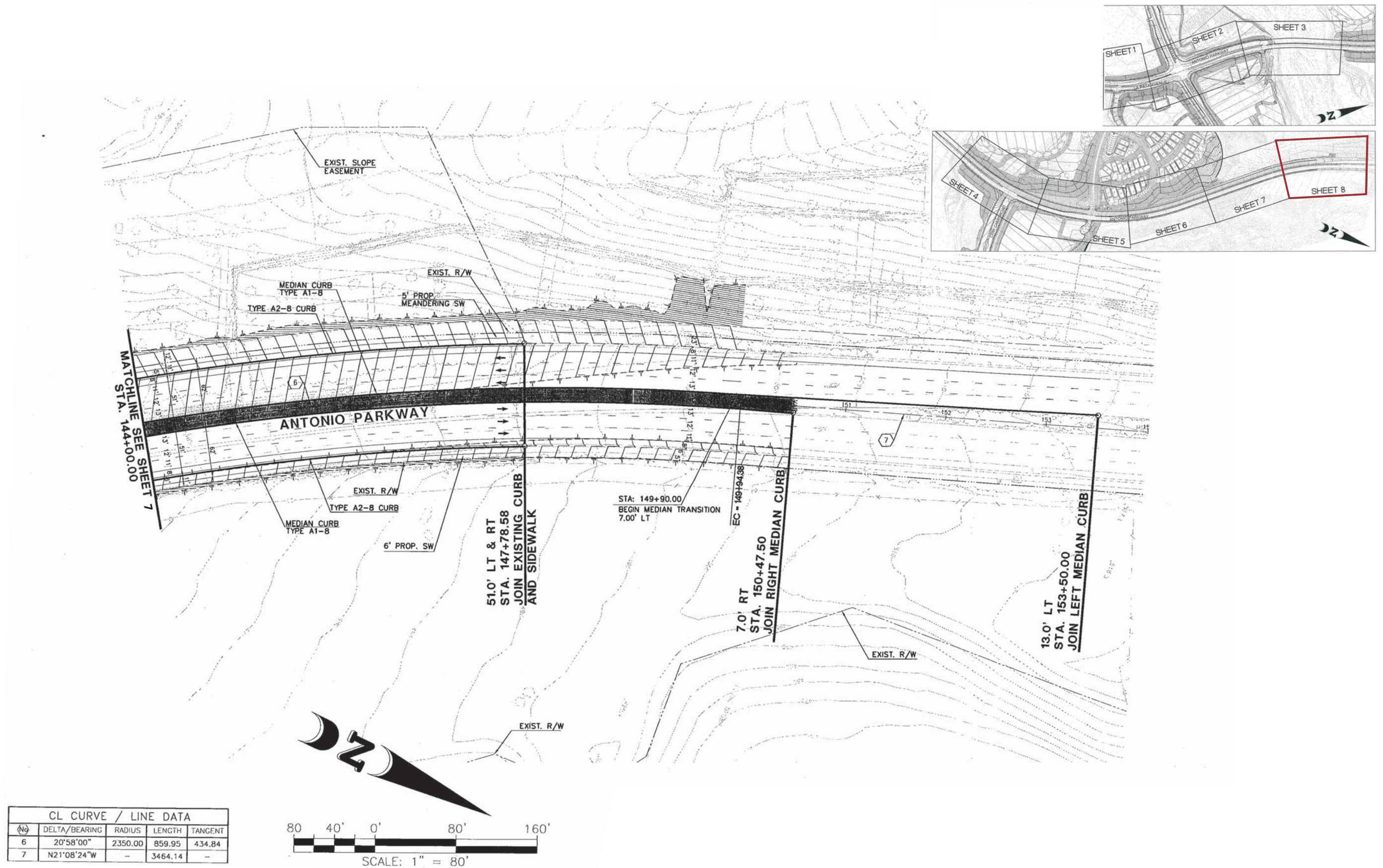


Conceptual Project Plans

Antonio Parkway Widening

Source: Huitt Zollars 2008

Figure 10g



Conceptual Project Plans

Antonio Parkway Widening

Source: Huitt-Zollars 2008

Figure 10h

- A 15-foot-wide parkway on the southbound side.

As previously indicated, the project would involve improvements to approximately 900 feet of La Pata Avenue to provide transition from the six-lane Antonio Parkway improvements to the existing configuration for La Pata Avenue. La Pata Avenue is designated as a Primary Arterial Highway. The standard Primary Arterial curb-to-curb width is 84 feet, with a total of a 100-foot-wide right-of-way. The improvements to La Pata Avenue would utilize the existing centerline. To provide for this transition and meet the operational requirements, La Pata Avenue immediately south of SR-74 would have three southbound lanes with a four-foot-wide median, two northbound left-turn lanes, three northbound through lanes, and a northbound right-turn lane. This project would match the existing La Pata Avenue profile and super-elevation rates.

Because turn lanes are proposed, which is beyond what was analyzed as part of the original project in 1995, additional right-of-way would be required to implement the proposed project. The additional right-of-way would affect six parcels. The total area would be approximately 1.8 acres. Rancho Mission Viejo, LLC would dedicate the required right-of-way to the County.

Signal Improvements and Lighting

No signal modifications, other than timing adjustments, would be required at the Antonio Parkway/SR-74/La Pata Avenue intersection because the ultimate signal requirements and placement will have been installed in conjunction with the ongoing SR-74 project. The signal improvements would ultimately be installed at the following intersections: Antonio Parkway/Cow Camp Road and at Antonio Parkway/"C" Street. However, the signal improvements would be phased into operation to meet traffic needs of arterial traffic with the adjacent development. Street lighting would be consistent with the County of Orange requirements for safety lighting.

ADA Compliance

Not all proposed sidewalks and handicap ramps on Antonio Parkway would meet Americans with Disabilities Act (ADA) requirements. Preliminary findings show that the cross slope through the crosswalks on Antonio Parkway and at its intersections with Cow Camp Road and "C" Street may exceed the ADA slope. This deviation is due to the existing profile grade (six percent) along Antonio Parkway. The sidewalk along Antonio Parkway north of San Juan Creek would also follow the roadway grade and would therefore exceed ADA requirements for slope.

All proposed sidewalks and handicap ramps on La Pata Avenue would be ADA compliant except the crosswalks across the private street located approximately 600 feet south of SR-74 along the eastern side of La Pata Avenue, which would exceed the ADA standards for crosswalk cross slope due to the existing superelevation (5.4 percent) along La Pata Avenue.

County of Orange standards, ADA Code, and the California Government Code all have provisions that allow modifications to the ADA requirement for safety issues (this is further discussed in Chapter 2, Pedestrian Facilities).

Drainage and Water Quality

Drainage improvements would be added for the proposed improvements. The tributary area to the existing storm drain will not change. The existing flow-by catch basins were sized based on preliminary 10-year peak flow rate estimates, and all sump catch basins were sized for a 25-year peak flow rates; all of which do not require modification. The flows on the western side of the roadway would be redistributed as ditches, and inlets would be replaced by gutters and catch basins.

Runoff from the new impervious area of Antonio Parkway from the Ladera Ranch Planned Community boundary south to the northern terminus of the San Juan Creek Bridge would be treated by cartridge media filtration (or an equivalent proprietary Best Management Practice [BMP]). The cartridge media filtration system would be appropriately sized to treat the project runoff

The runoff from the new Antonio Parkway Bridge, Antonio Parkway south of the bridge to SR-74, and the small area of La Pata Avenue south of SR-74 would be treated in the proposed water quality basin that would be constructed with development in the northeastern corner of the Antonio Parkway and SR-74 intersection.

The existing San Juan Creek Bridge drains through deck inlets for direct discharge to San Juan Creek. Retrofitting the existing bridge deck with a storm drain system is not required with current water quality standards. Under the County's Drainage Area Management Plan, retrofitting the existing bridge is not required because the percentage increase in impervious surface is less than 50 percent of the amount of existing impervious area. Therefore, the County would not be required to treat runoff from the existing portion of the bridge.

Provisions for Future Bikeways and Trail

Bikeways and trails are provided as part of the roadway design. The *County of Orange General Plan* has designated a Class II bikeway on Antonio Parkway/La Pata Avenue. A Class II facility is in a typical highway shoulder that is signed and marked for bike lanes with no vehicle parking allowed. The County of Orange Standard Plans 1101 and 1103 identify that the roadway shoulder should be eight feet wide for a Major Arterial and ten feet wide for a primary arterial highway. This has been provided in the standard cross-section for the proposed improvements. The bike lane/shoulder widths on Antonio Parkway and La Pata Avenue at the SR-74 intersection match the shoulder widths designated by the California Department of Transportation (the Department) in its right-of-way.

In addition to the on-road bikeway, the County *Master Plan of Bikeways* designates a Class I (off-road) bike trail parallel to and on the north side of San Juan Creek, and the *Master Plan of Regional Riding and Hiking Trails* shows a regional riding and hiking trail parallel to and on the south side of San Juan Creek. The embankments under the bridge have been designed to accommodate the multi-use trail required by the *Master Plan of Regional Riding and Hiking Trails* on the abutment on the southern side of the creek, and the bike trail would be located on the northern side of the creek, consistent with the *Master Plan of Bikeways*.

Utilities

Roadway design would require modification to several existing utilities or would require work within their easements. Modification may be necessary to allow for appropriate sizing of utilities to serve the approved development adjacent to the roadway. The following utility modifications would be required:

- Approval of grading in the Santa Margarita Water District (SMWD) easement;
- Approval of grading in the Capistrano Valley Water District (CVWD)/City of San Juan Capistrano easement;
- Relocation of existing San Diego Gas & Electric (SDG&E) utility lines; and
- Relocation of existing AT&T utility lines.

Grading Requirements

From the southern boundary of Ladera Ranch to the bridge across San Juan Creek, the grading for the full six-lane cross-section was done in conjunction with the initial phase (four lanes) of Antonio Parkway. Through this portion of the study area, only minor grading would be required. Grading would be required for construction of the bridge abutments and the area south of the bridge. Approximately 100,000 cubic yards of cut and fill would be required for the project. Grading for the project would be balanced.

Two staging areas have been identified. The first would be located at the northwestern corner of Antonio Parkway and SR-74. This site is currently a staging area for the ongoing construction of improvements on SR-74. The second site is north of the bridge. The environmental impacts for both staging areas and the grading associated with obtaining the necessary fill material were addressed pursuant to CEQA as part of the environmental compliance documents for the Ranch Plan. Figure 11 depicts the area of potential disturbance or impact, including staging areas and temporary construction areas.

The roadway would remain open during construction. No detours would be required.

No Build (No Action) Alternative

The No Build Alternative would not provide any improvements to Antonio Parkway. The segment of the roadway from the southern boundary of the Ladera Ranch Planned Community to SR-74 would not be widened to full major arterial highway width.

IDENTIFICATION OF THE PREFERRED ALTERNATIVE

The PDT evaluated the environmental impacts associated with the Antonio Parkway widening project as outlined in this EA including the comment letters received during the public review period. Four comment letters were received on the EA during the public review period and no members of the public attended the public meeting. In making their selection of the Build Alternative as the preferred alternative, the PDT evaluated the ability of the two alternatives analyzed in the Draft Environmental Document (Build Alternative and No Action Alternative) to meet the Purpose and

Need for the project and the extent of environmental impacts associated with each alternative. Only the Build Alternative was able to satisfactorily accomplish the purpose that was established for the proposed project. Based on the findings in this environmental document, all environmental impacts associated with the Build Alternative would be less than substantial with the implementation of the avoidance, minimization, and mitigation measures.

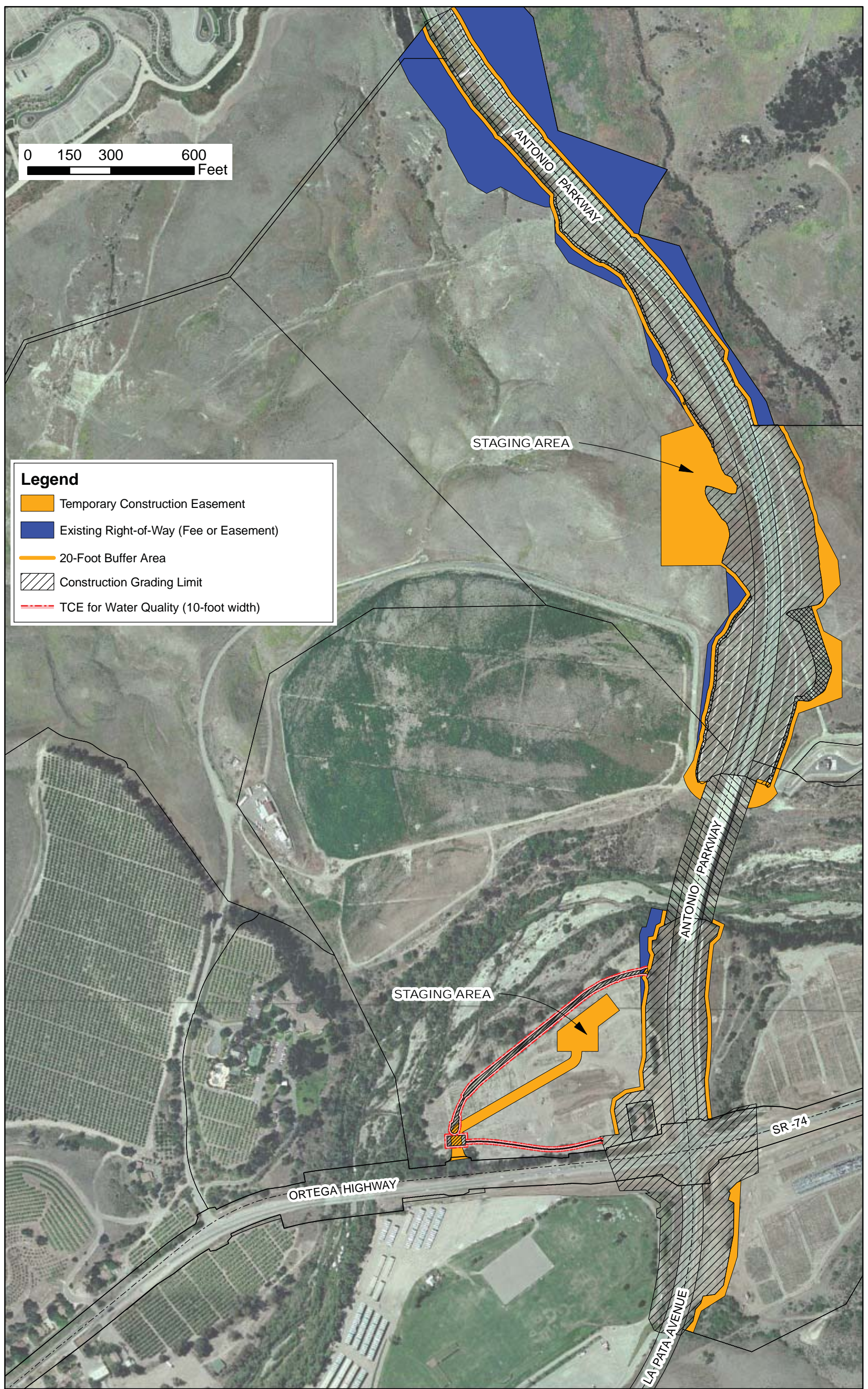
In summary, the purpose of the project is to provide sufficient transportation infrastructure to meet the long-term travel demand and be consistent with planning programs. The following provides a discussion of the project purpose and the rationale for the selecting the preferred alternative.

The first and third bullet items in the project purpose pertain to the need to provide sufficient infrastructure to meet the long-term travel demand. As discussed in the Need Section above, previous studies conducted by the County of Orange have identified the need for a major arterial highway to serve the north-south travel demand in southeast Orange County. Due to topography and existing development, there are limited opportunities for roadways parallel to and east of I-5. In the mid-1990s, the County established an alignment for Antonio Parkway and constructed interim improvements. Widening to the intended full six lanes is necessary to meet the existing and projected travel demand. The Antonio Parkway/SR-74 intersection is currently operating at a deficient level of service in the morning peak hour. Traffic level of service is projected to further degrade as approved regional and local growth occurs. With the Build Alternative there are no projected deficiencies. However, with the No Build Alternative deficiencies are projected at two intersections in 2035. The Build Alternative is better able to meet the projected demand and accomplish the project purpose.

The second bullet item in the project purpose is to provide improvements consistent with planning programs. Based on the earlier travel demand studies, the County of Orange designated Antonio Parkway as a major arterial highway on their *Transportation Element* and the OCTA reflected the same designation on the MPAH. The RTP and RTIP also assume a roadway that would serve this travel demand. The Build Alternative is consistent with these planning programs because it would improve Antonio Parkway to full arterial standards. By not providing the planned improvements (i.e., No Build Alternative), Antonio Parkway would not function as a major arterial highway. Since the assumption that Antonio Parkway would ultimately be a six-lane roadway has been part of the baseline for both local and regional land use and transportation planning, the No Build Alternative would be inconsistent with applicable planning programs. In addition, as stated above, there are no reasonable opportunities to provide another north-south roadway that would serve the travel demand intended for Antonio Parkway. Therefore, the Build Alternative is able to accomplish this element of the project purpose, which would not be addressed by the No Build Alternative.

The Preferred Alternative provides the greatest benefit to the public by improving traffic congestion in the project study area. These improvements will also serve the projected growth of the region.

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Project Footprint (Permanent and Temporary Impact Areas)

Figure 11

Antonio Parkway Widening

Source: Huitt Zollars 2009

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ALTERNATIVES CONSIDERED BUT ELIMINATED FROM FURTHER EVALUATION

Other modes of transportation, such as rail or bus, were not carried forward as alternatives. These modes of transportation by themselves could not satisfy the project purpose and need. Currently, there is no rail line in the project vicinity and the cost of such facilities would be beyond the scope of current funding and would not be a reasonable alternative. Rail service is provided in Orange County through Metrolink and Amtrak.

Though transit can be effective in reducing congestion, the long-range demand would not be served by transit alone. The Orange County Transportation Authority (OCTA) is responsible for transit service in Orange County. OCTA evaluates the demand when deciding the location bus routes. As this area develops, it is anticipated that there would be greater demand for transit. It should be noted that the traffic model used for projecting future traffic volumes assumes transit growth in the region. Therefore, the benefits from a growth in transit have been assumed for both the No Build Alternative and the Preferred Alternative.

The County of Orange has adopted a Transportation Demand Management (TSM) Ordinance aimed at reducing the number of trips that are generated by development projects. Both Ladera Ranch and the Ranch Plan Planned Communities had a standard condition of approval to develop a TDM program in conjunction with development of the Urban Activities Centers. In addition, the Ladera Ranch Planned Community has an extensive network of trails and bikeways to encourage alternative transportation. A similar network will be built within the Ranch Plan, which will connect to the local Ladera Ranch network, as well as the regional trail and bikeway networks. In addition, the Ranch Plan has received special legislation to allow the development of the Ranch Plan Sustainable Circulation Plan (also referenced as Neighborhood Electric Vehicle [NEV] and Low Speed Vehicle [LSV] system). Though this is not directly related to Antonio Parkway, it represents the type of measures that are being implemented in the region to reduce traffic and encourage alternative modes of transportation. Antonio Parkway is making provisions for these improvements by providing the opportunities for regional bike path and trail with the bridge design. However, even with all these measures, the long-range traffic forecasts for the region show a demand for additional improvements to meet the project purpose and need.

PERMITS AND APPROVALS NEEDED

Table 3 below provides a summary of the permits and/or approvals that are, or may be, required prior to or during construction of the proposed project.

Table 3
Permits and Approvals

Agency	Permit/Approval	Status
U.S. Fish and Wildlife Service (USFWS)	Threatened and Endangered Species Permit	The project is located in the Southern Orange County Habitat Conservation Plan (Southern HCP). The project was an assumed activity in the planning process. The project

Table 3 (Continued)
Permits and Approvals

Agency	Permit/Approval	Status
		is covered as part of the Incidental Take Permit issued pursuant to the Federal Endangered Species Act (FESA). USFWS permit number TE144140-0 was issued on January 10, 2007 and expires on January 10, 2082, which covers the proposed project. The Department initiated formal consultation with the USFWS on April 26, 2010. On June 16, 2010, the USFWS issued the Biological Opinion.
U.S. Army Corps of Engineers (ACOE)	Section 404 Permit for filling or dredging waters of the United States.	The proposed project was identified as a component of the Ranch Plan Planned Community's Planning Area 1 improvements (also known as the Ortega Gateway Project, which includes residential and urban activity center, as well as improvements to Antonio Parkway and SR-74). In conjunction with the processing of Planning Area 1, the ACOE issued an individual Section 404 permit (permit number 200602159).
California Department of Fish and Game (CDFG)	1602 Agreement for Streambed Alteration.	The proposed project was identified as a component of the Ranch Plan Planned Community Planning Area 1 improvements. In conjunction with the processing of Planning Area 1, a Streambed Alteration Agreement was issued by the CDFG (Notification No. 1600-2006-0178-R5). On July 15, 2010, an extension of the agreement until December 31, 2015 was issued.
California Water Resources Control Board—San Diego Region (SDRWQCB)	Water Quality Certification and Waste Discharge Permit	The proposed project was identified as a component of the Ranch Plan Planned Community's Planning Area 1 improvements. In conjunction with the processing of Planning Area 1, the SDRWQCB issued Waste Discharge permit WDID No. 9 000001486 and Section 401 Water Quality Certification No 06C-047.
FHWA	Air Quality Conformity Determination	The FHWA issued an air quality conformity determination letter dated April 26, 2010.
State of California, Department of Transportation	Encroachment Permit	Prior to the initiation of construction, an encroachment permit issued by the Department would be required for all construction activities within SR-74 right-of-way.

Table 3 (Continued)
Permits and Approvals

Agency	Permit/Approval	Status
County of Orange	Approval of the Water Quality Management Plan (WQMP)	Pursuant to the County's Drainage Area Management Plan (DAMP), the County is responsible for approving a WQMP to verify compliance with the County's MS4 permit. The County reviewed and approved the WQMP as part of the Project Report.
County of Orange	Approval of the design plans including certification of right-of-way and utilities. Approval of construction contract.	Upon approval of the final NEPA document, the County of Orange, as the local jurisdiction and owner of the facility, would be required to approve design plans for the project. Once design plans are completed and approved, the County of Orange would be responsible for selection and oversight of a construction contractor.

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Chapter 2—Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

INTRODUCTION

As part of the scoping and environmental analysis conducted for the project, the following environmental resources were considered, but no potential for adverse impacts to these resources was identified. Consequently, there is no further discussion regarding these resources in this document.

- **Consistency with Local Plans and Goals.** The proposed project would not conflict with the adopted goals and policies of the community. The roadway is reflected in the *County of Orange General Plan* and the *Orange County Master Plan of Arterial Highways*. Antonio Parkway is reflected in the *Ranch Plan Planned Community Text*, which is the governing zoning document. In addition, the project has been incorporated into the regional planning programs (i.e., RTP and RTIP).
- **Disruption of an Existing Community.** The project would not disrupt an existing community. The roadway extends through undeveloped land.
- **Coastal Zone Impacts.** The proposed project does not lie within an area designated as a Coastal Zone, nor is it in the San Francisco Bay or Suisun Marsh areas. The project is located approximately seven miles from the ocean in southern Orange County.
- **Wild and Scenic Rivers.** According to the National Park Service (which is responsible for administering the National Wild and Scenic Rivers System), there are no water resources that have been designated as a wild or scenic river in the vicinity of the project site.
- **Farmland and Timberland.** Based on the California Department of Conservation Farmland Mapping, the project would not impact any Important Farmland (i.e., Prime, Unique, or Farmland of Statewide Importance). There are no Williamson Act contracts for properties within or adjacent to the project limits. In addition, there is no active cultivation ongoing within or immediately adjacent to the project limits. In addition, the project would not impact any areas designated as agricultural wetlands by the U.S. Department of Agriculture. There are no timberlands within the project study area.
- **Relocation Impacts.** The proposed project would not require the relocation of businesses or residential properties.
- **Environmental Justice.** There is no development immediately adjacent to the roadway that would be affected by the proposed project; therefore, there would not be direct impacts to low-income or minority populations. A review of the 2000 census data for census tracts 320.52, 320.56, and 320.23 reveals

that the population in the three affected census tracts is predominately white. It ranges from 81 percent white (Tract 320.56) to 96 percent white (Tract 320.52). The median income for these tracts was also higher than the Countywide average in the Year 2000. The median annual income for the three census tracts ranged from \$102,068 to \$114,721.

- **Parking Impacts.** Implementation of the proposed project would not result in the loss of available parking since on-street parking on Antonio Parkway is prohibited.
- **Encroachment on Tribal Land.** There are no tribal lands designated in Orange County; therefore, the project could not encroach on these territories. In addition, there are no burial grounds present within the Area of Potential Effect.
- **Sole Source Aquifer.** The U.S. Environmental Protection Agency (USEPA) has not designated any sole source aquifers in Orange County.
- **Section 6(f) Impacts.** The proposed project would not affect properties acquired or improved with Land and Water Conservation Fund Act (Section 6(f)) funds as such funds have not been used on the proposed project site or in the vicinity of the proposed project.

HUMAN ENVIRONMENT

Land Use

Affected Environment

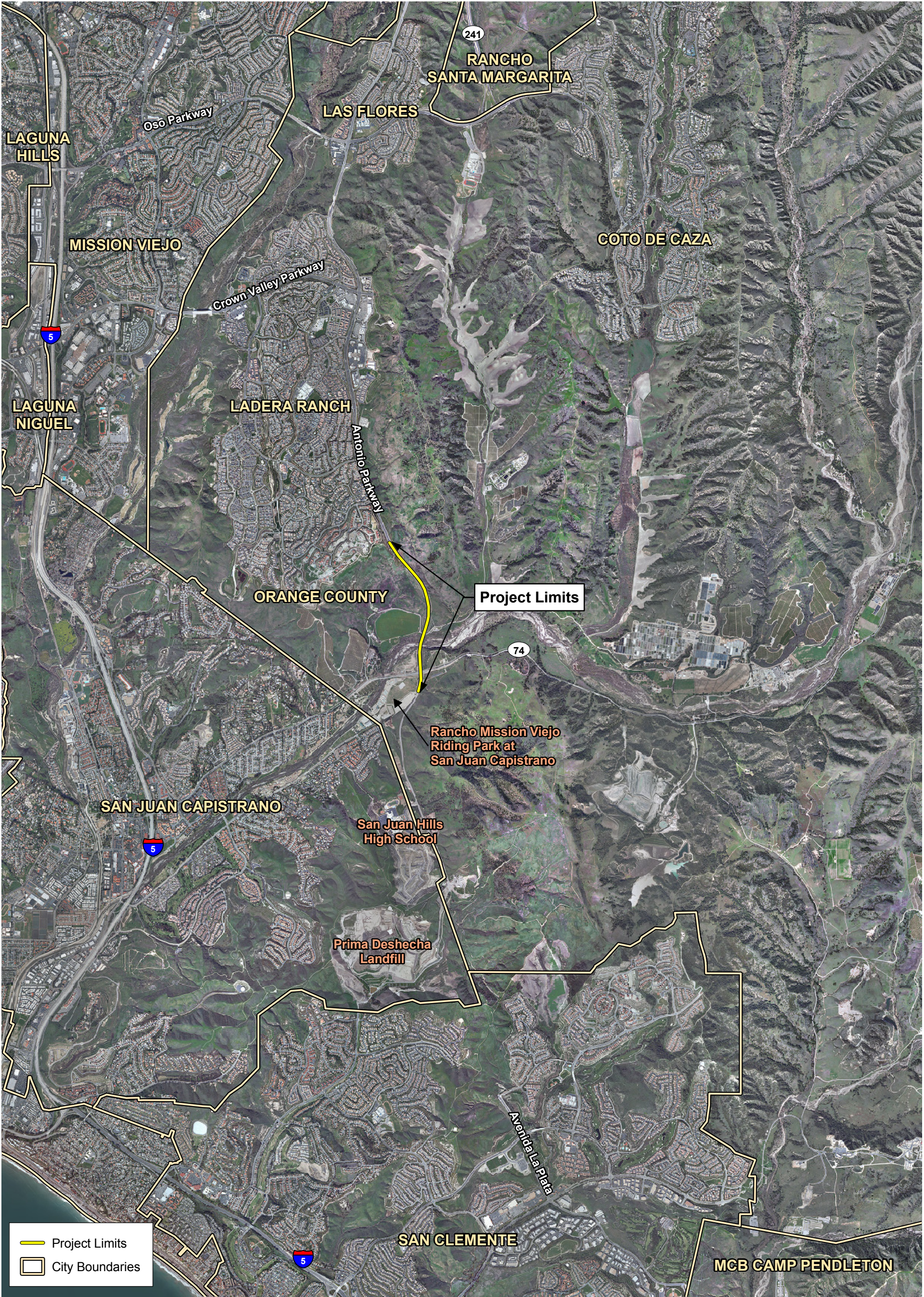
Existing and Future Land Use

The Antonio Parkway project site is located within the unincorporated portion of southeastern Orange County. The alignment traverses the Ranch Plan Planned Community. Though the area immediately adjacent to the roadway is mostly undeveloped, there are a number of land uses near the roadway. Figure 12, Existing Land Uses, provides an aerial photograph of the project site and surrounding area with key uses identified.

The unincorporated planned community of Ladera Ranch is located to the north. This community contains approximately contain 8,100 dwelling units and approximately 125 acres of Urban Activity Center³ uses. This area was developed in the late 1990s and the earlier part of this decade with residential, commercial, and office uses. The majority of Ladera Ranch has been completed. There are a few custom home sites remaining in the southernmost portion of the community. This area, known as Covenant Hills, is located at the northern terminus of the project limits.

The area to the east of the roadway is currently undeveloped. The land adjacent to the northeastern portion of the project is designated for permanent open space.

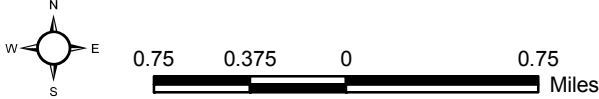
³ The Orange County Land Use Element defines an Urban Activity Center land use category as an area "intended for high-intensity mixed-use development. Appropriate land uses include, but are not limited to, residential, commercial, and offices uses; industrial parks and materials recovery/recycling facilities; civic, cultural, and educational uses; and childcare facilities."



Existing Land Uses on an Aerial Base

Figure 12

Antonio Parkway Widening



DMB Ladera is the underlying landowner and The Reserve at Rancho Mission Viejo holds a conservation easement. The conservation easement was required in conjunction with the development of Ladera Ranch.

The area surrounding Antonio Parkway is currently open space, but is approved for development as part of the Ranch Plan Planned Community. The Ranch Plan encompasses 22,815 acres, of which 75 percent will be retained in open space. In 2004, this area was been approved for development of 14,000 dwelling units, 3,480,000 square feet (sf) of urban activity center uses, 500,000 sf of neighborhood center uses, and 1,220,000 sf of business park uses. The proposed project traverses the portion of the Ranch Plan known as Planning Area 1. Figure 13 depicts the boundary of the Ranch Plan Planned Community. Planning Area 1 has been approved for 1,170 residential units and 400,000 sf of urban activity center uses.

The Rancho Mission Viejo Riding Park at San Juan Capistrano is an equestrian sports center located in the southwestern quadrant of the SR-74/La Pata Avenue Intersection. In January 2010, the City of San Juan Capistrano acquired the property, as well as other adjacent open space land. As a result of the purchase and an action by the Local Agency Formation Commission (LAFCO) in December 2009, the San Juan Capistrano city limits extend east to La Pata Avenue on the south side of SR-74. The use at the Rancho Mission Viejo Riding Park at San Juan Capistrano (and associated open space area), will remain the same. All required right-of-way in this quadrant of the intersection has been dedicated to the County of Orange prior to the close of escrow on the Riding Park.

San Juan Hills High School is located south of the project limits. Access to the school is off La Pata Avenue. The high school is part of the Capistrano Unified School District. Currently, the school serves grades 9 through 11; however, in fall of 2010 12th grade will be added.

Whispering Hills Planned Community, located next to San Juan Hills High School, is currently under construction. This residential community is expected to construct models in late 2010.

The Prima Deshecha Landfill is located approximately 1.8 miles south of the Antonio Parkway/La Pata Avenue/SR-74 intersection. The landfill is owned and operated by the County of Orange. La Pata Avenue is the only access road to the landfill. Currently the landfill processes approximately 1,700 tons of refuse daily with a planned increase to 4,000 tons per day.

The Rancho Mission Viejo headquarters offices are located approximately $\frac{1}{3}$ mile west of the roadway alignment. Access to the headquarter offices is off of SR-74, west of the Antonio Parkway intersection.

The City of San Juan Capistrano is located to the west beyond the Rancho Mission Viejo property. The portion of the city nearest the project has been developed with residential uses.

Commute Patterns

As previously discussed, Antonio Parkway provides connection between the cities of San Juan Capistrano, Mission Viejo, and the Rancho Santa Margarita, as well as the community of Ladera Ranch. Antonio Parkway also attracts trips from Riverside

County because of its connection with SR-74, which is the only route in south Orange County that provides a connection with Riverside County to the east. Trips from Riverside County wanting to access southeast Orange County utilize Antonio Parkway to go north to employment centers in Rancho Santa Margarita or to connect with SR-241, which provides access to major employment and commercial uses in Foothill Ranch located in the City of Lake Forest.

Antonio Parkway also serves as an access route from the north to the Prima Deshecha Landfill. As a result, Antonio Parkway has a higher than average amount of truck volume. After 2015, the landfill will no longer be accepting solid waste material from San Diego County, so most of the truck trips accessing the landfill will be to and from the north.

Development Trends

Development trends for the region were discussed earlier as part of the Purpose and Need. By year 2035, south Orange County is projected to experience a 35 percent increase in housing, a 61 percent increase in employment, and a 44 percent increase in average daily traffic (ADT) demand compared to 2005. Figure 5, Projected Housing and Employment Growth Within the Project Area, previously presented in Chapter 1 shows the projected distribution of growth in the area of influence of Antonio Parkway.

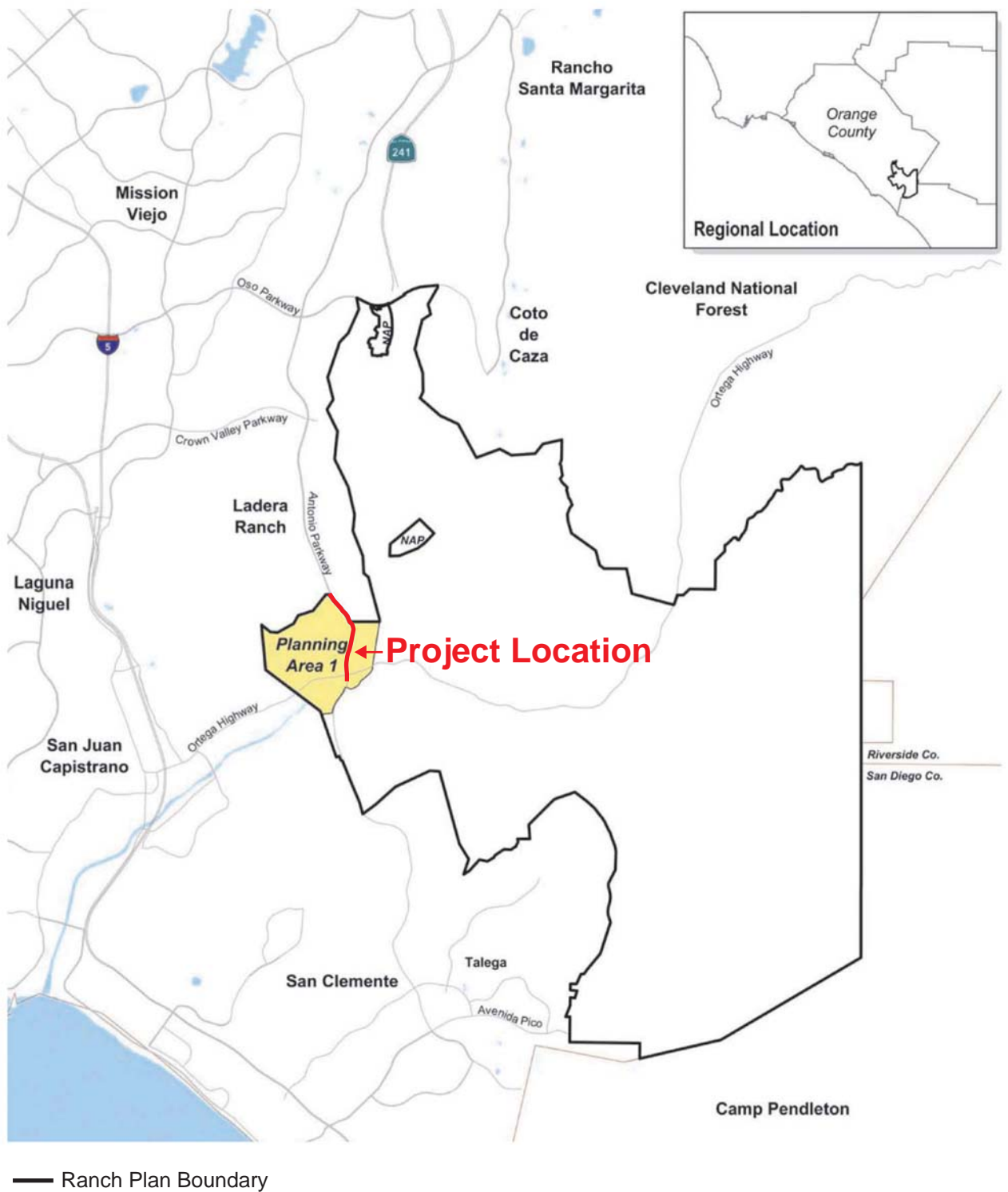
Environmental Consequences

Build Alternative "Proposed Project" (Preferred Alternative)

The proposed project would require minor amounts of right-of-way acquisition or dedication; however, this would not necessitate alteration of any site-specific land uses. A total of 1.806 acres of right-of-way would be required. The areas where right-of-way would be required are depicted in Figure 14 and listed by parcel in Table 4. In addition, the project would not alter land use patterns or long-range development concepts. The roadway widening was assumed as part of the land use planning effort and the right-of-way has been protected. The landowner is required to dedicate the necessary right-of-way.

Table 4
Antonio Parkway Right-of-Way Requirements

Assessor Parcel Number	Legal Parcel Size (acres)	Amount of Right-of-Way Required (acres)	Percent of Parcel Required for Right-of-Way
125-173-12	89.395	0.240	0.268
125-171-52	77.052	0.603	0.783
125-173-02	104.966	0.434	0.413
125-171-86	69.714	0.184	0.264
125-172-19	27.637	0.345	1.25
Source: Huitt-Zollars 2009.			



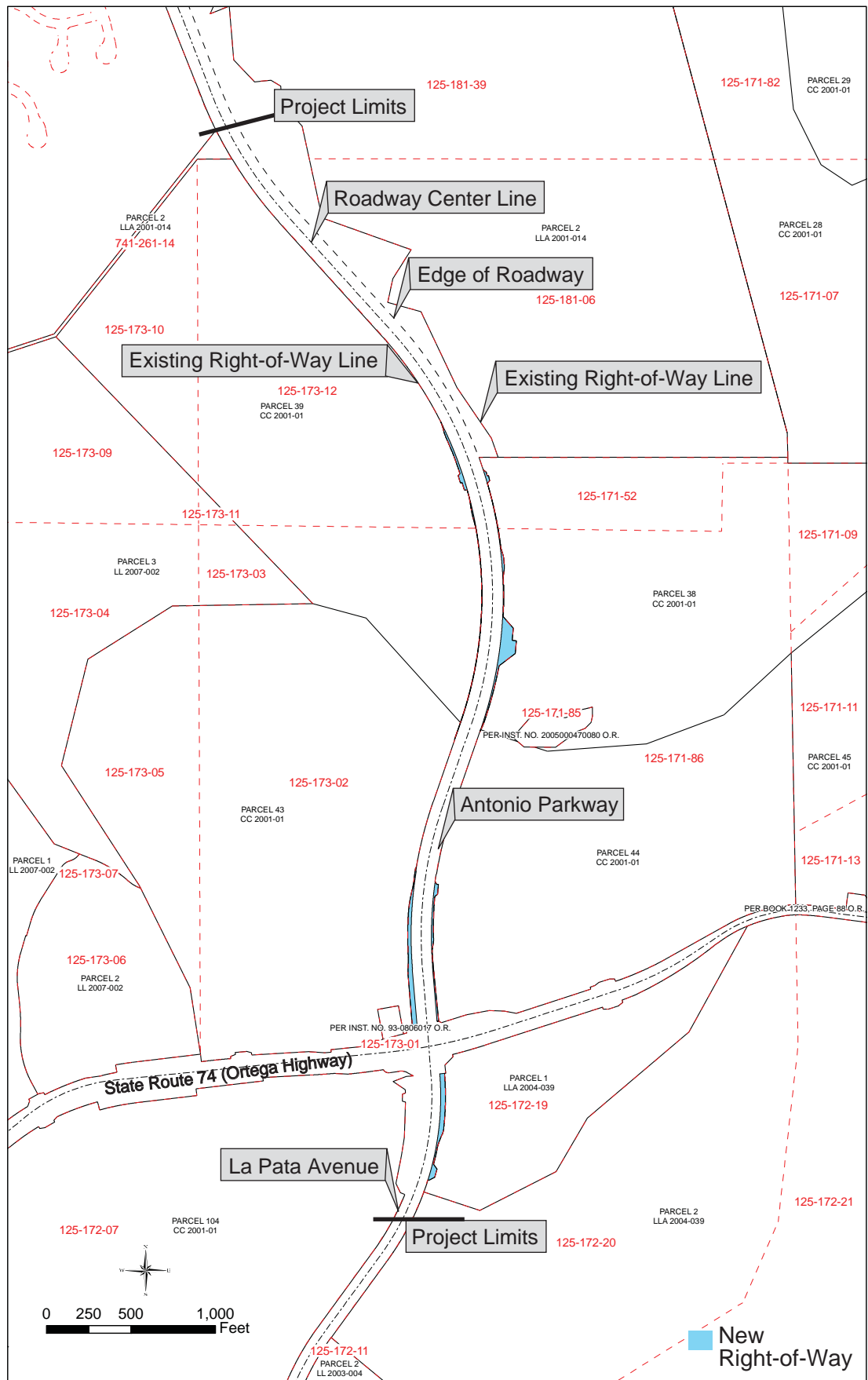
Ranch Plan Boundaries

Figure 13

Antonio Parkway Widening



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New Right-of-Way Requirements

Figure 14

Antonio Parkway Widening

The proposed project would support the existing and future land uses by providing an improved circulation network. By improving circulation in the study area, the proposed project would support the land uses envisioned by the *Orange County General Plan*. The project would improve the existing and projected level of service in the study area (this is further discussed under “Traffic and Transportation”). The project would not affect commute patterns. The project would allow the roadway to accommodate future demand based on approved land uses. No roadway closures would be required during construction.

No Build (No Action) Alternative

The No Build Alternative would not result in any impacts on existing land uses. It could potentially impede the implementation of planned land uses by constraining the capacity of the existing circulation network. The *Orange County General Plan* assumes the implementation of the proposed project. As a result, if the project were not implemented, a critical link in the local and regional circulation network would remain underdeveloped. However, development is not conditioned on the construction of the proposed facility, and it would be speculative to assume that development (both approved and planned) would not occur because the improvements are not implemented. It may require the County of Orange to reevaluate the circulation network and implement alternative improvements to support planned land uses.

It is unlikely that the No Build Alternative would substantially alter commute patterns. There is a limited roadway network in this portion of the County. Therefore, even though the level of service would deteriorate in the future, there are limited options for drivers to use alternative routes.

Avoidance, Minimization, and/or Mitigation Measures

The proposed project would not result in any impacts to existing or proposed land uses, commutes, or development trends. The future widening of the roadway has been incorporated into local and regional planning efforts. Through these planning efforts, the right-of-way has been protected from the development of conflicting land uses; however, there is a need to acquire right-of-way for the ultimate roadway cross-section. The following minimization measure associated with right-of-way acquisition is proposed:

- LU-1 Prior to approval of final construction plans, the County of Orange shall obtain all necessary right-of-way for the ultimate improvements. Should the roadway precede the development of the adjacent land uses and offers of dedication have not been made, the County shall work with the landowner(s) to acquire the land or to allow for early dedication of the necessary right-of-way.

Consistency With State, Regional, and Local Plans

Affected Environment

Southern Habitat Conservation Plan and Special Area Management Plan

The *Southern Habitat Conservation Plan* (Southern HCP) and the *Special Area Management Plan* (SAMP) have been adopted to address habitat conservation and

species protection. The project's consistency with these planning programs is included in the evaluation of Biological Environment.

Southern California Association of Governments Regional Planning Programs

The Southern California Association of Governments (SCAG) is the Metropolitan Planning Organization (MPO) for six counties: Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial. The region encompasses a population exceeding 15 million persons in an area of more than 38,000 square miles. As the designated MPO, the federal government mandates SCAG to research and draw up plans for transportation, growth management, hazardous waste management, and air quality. Most applicable to this project are the *Regional Comprehensive Plan* (RCP) and the RTP/Regional Transportation Improvement Plan (RTIP).

SCAG has prepared the 2008 RCP. The RCP is a major advisory plan that addresses important regional issues like housing, traffic/transportation, water, and air quality. The Plan is intended to provide policy guidance for local planners. The Plan consists of nine chapters that incorporate the applicable policies for specific areas of planning and resource management. The transportation chapter of the 2008 RCP is a compendium of actions and policies based on the adopted 2008 RTP. It offers an action plan for implementing strategies in support of the policies adopted by the SCAG Regional Council.

SCAG's 2008 RTP is a 25-year plan that provides a vision for transportation investments in the SCAG region using an assessment of growth and economic trends over the next 25 years. The 2008 RTP presents the transportation vision for the SCAG region through the year 2035 and provides a long-term investment framework for addressing the region's transportation and related challenges. The Plan is the culmination of a multi-year effort focusing on maintaining and improving the transportation system through a balanced approach that considers system preservation; system operation and management; improved coordination between land-use decisions and transportation investments; and strategic expansion of the system to accommodate future growth. SCAG also develops the RTIP, which serves as the short-term capital improvements listing of all transportation projects proposed to be implemented in the region over a six-year period. It is updated every two years.

Master Plan of Arterial Highways

The Orange County Transportation Authority (OCTA) is responsible for the *Master Plan of Arterial Highways* (MPAH), which is a countywide planning tool that defines the Orange County freeway, toll road, and arterial circulation system. The MPAH was initially established in 1956 and is continuously updated to reflect changing development and traffic patterns. Both the location and the carrying capacity (number of lanes) of each arterial highway is designated on the Orange County MPAH. Local jurisdiction compliance in implementing the Orange County MPAH is a necessary requirement for local and federal transportation funding. Orange County jurisdictions are required to maintain General Plan Circulation Elements which are consistent with the Orange County MPAH, and to certify such compliance every two years. This compliance is a prerequisite to maintain eligibility for receipt of Measure M sales tax revenues and to participate in competitive transportation funding programs at the federal and county levels.

Orange County General Plan and Zoning

Since the area surrounding Antonio Parkway is unincorporated, the *Orange County General Plan* and the *Ranch Plan Planned Community Text*, which serves as the zoning ordinance for the land surrounding the project site, are the primary guidance documents for land use activities in the project study area. The County of Orange General Plan contains nine elements. The most relevant elements to this project are the *Land Use Element* and the *Transportation Element*.

The *Land Use Element* identifies policies and programs in other General Plan elements that affect land use and provide guidance for future land use planning studies for the unincorporated portion of the County. The *Land Use Element* discusses the planning constraints and deficiencies that affect development in Orange County: environmental, fiscal, economic and market, and governmental. Figure 15 depicts the Land Use Map included in the County of Orange *Land Use Element* of the General Plan for the area surrounding Antonio Parkway.

The *County of Orange General Plan Transportation Element* "...contains County policies on the development of transportation facilities necessary to accommodate orderly growth of the County". The *Transportation Element* sets forth a comprehensive strategy for planning, developing, and maintaining a surface transportation system to serve existing and planned land uses in the unincorporated areas of Orange County. The Circulation Map from the *Transportation Element* of the General Plan is shown in Figure 16.

Specific Development Proposals

As discussed on page 19 under Land Use, the County of Orange has approved development for the area surrounding Antonio Parkway. The area is part of the Ranch Plan Planned Community. The Ranch Plan encompasses 22,815 acres and is approved for development of 14,000 dwelling units, 3,480,000 sf of urban activity center uses, 500,000 sf of neighborhood center uses, and 1,220,000 sf of business park uses. Approximately, 75 percent of the Ranch Plan area will be retained in open space. Antonio Parkway traverses the portion of the Ranch Plan known as Planning Area 1, which has been approved for 1,170 residential units and 400,000 sf of urban activity center uses. The precise layout of the development within Planning Area 1 will be determined in subsequent project approvals, such as tentative tract maps.

The Rancho Mission Viejo Riding Park at San Juan Capistrano is an equestrian sports center located in the southwestern quadrant of the SR-74/La Pata Avenue Intersection. In January 2010, the City of San Juan Capistrano acquired the property, as well as other adjacent open space land. There is not an adopted General Development Plan for the park. The area has been used for equestrian activities, as well as field sports. The uses will remain the same. The adjacent open space areas have a conservation easement overlay; therefore, no recreational activities will be allowed in these areas.

Whispering Hills Planned Community is a proposed residential neighborhood next to San Juan Hills High School that is scheduled to construct models in late 2010.

Environment Consequences

Build Alternative “Proposed Project” (Preferred Alternative)

The proposed project is consistent with State, regional, and local mobility goals and is being coordinated with affected governmental and regulatory agencies in the area to ensure consistency with specific local goals and objectives.

Southern California Association of Governments Regional Planning Programs

The project is included in the *2008 Regional Transportation Plan*, as amended. SCAG originally adopted the RTP in May 2008 and was found to be conforming by both the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) on June 5, 2008. It is also included in SCAG’s financially constrained *2008 Regional Transportation Improvement Program*, as amended, which was originally adopted by SCAG on July 17, 2008, and received the required air quality conformity determination from the FHWA and FTA on November 17, 2008. The RTP and RTIP were amended on December 3, 2009 and both include the project

The RCP contains actions and policies related to various planning issues, including regional transportation. These policies support those contained in the RTP. Specifically, these policies are designed to enhance vehicle flow and highway capacity. As a result, the proposed project is consistent with SCAG’s RCP.

Master Plan of Arterial Highways

Antonio Parkway is designated as a major arterial highway on the OCTA’s MPAH. The proposed project would widen the roadway to full arterial standards. The project would be consistent with the MPAH.

Orange County General Plan and Zoning

Land use and transportation policies have been established within the plans to ensure there is a balance between adopted land uses and the transportation facilities provided. By being incorporated into the County General Plan, the proposed project has been assumed as an integral part of the long-range transportation network. As such, the proposed project is required to ensure compatibility between the land use and transportation elements of the General Plan.

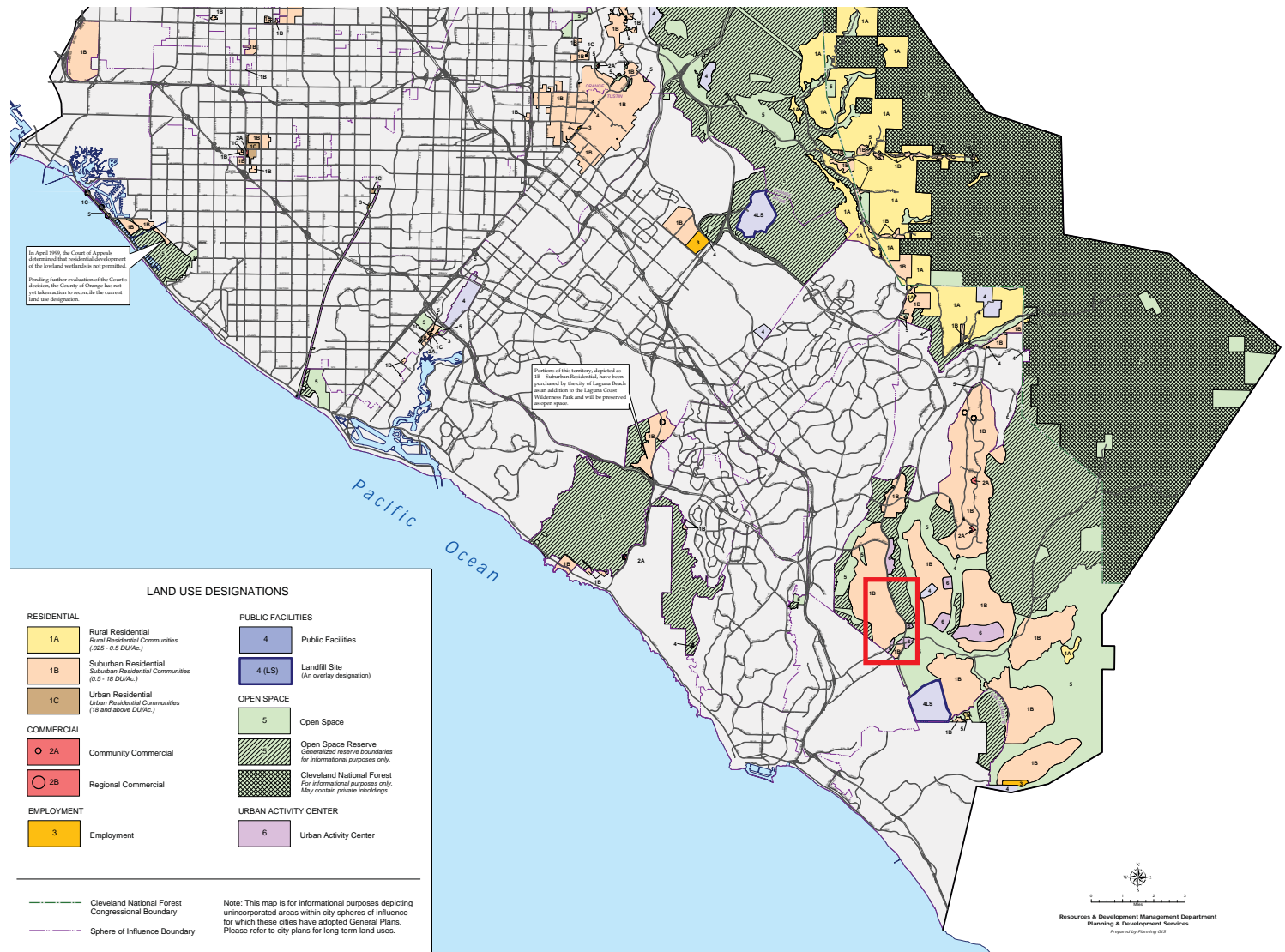
No Build (No Action) Alternative

Southern California Association of Governments Regional Planning Programs

The proposed project has been assumed as part of the 2008 RTP and has been included in the 2008 RTIP. The No Build Alternative would be inconsistent with these regional planning documents.

Master Plan of Arterial Highways

The No Build Alternative would preclude the full implementation of the MPAH. This segment of Antonio Parkway would remain underdeveloped. This would affect the ability of the roadway network to meet the intended demand. This alternative would be inconsistent with this countywide planning document.

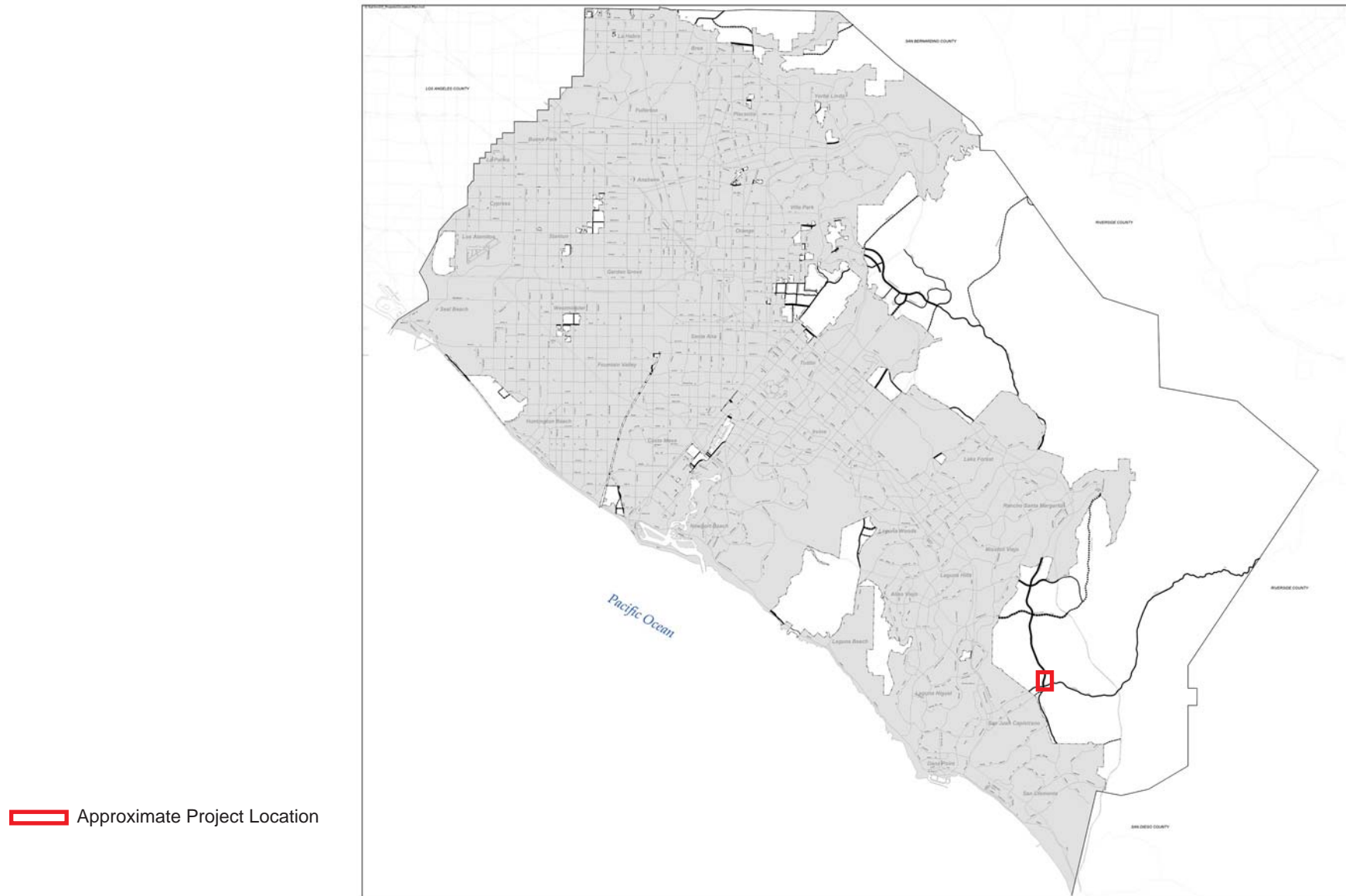


Orange County General Plan Land Use Map for the Project Area

Figure 15

Antonio Parkway Widening

Source: County of Orange



Orange County General Plan Circulation Map for the Project Area

Figure 16

Antonio Parkway Widening

Source: County of Orange

Orange County General Plan and Zoning

The No Build Alternative would be inconsistent with the *Orange County General Plan*. The General Plan is designed to ensure that infrastructure is sized to meet the long-range needs of the County. The No Build Alternative would result in the subject segment of Antonio Parkway being underdeveloped and inconsistent with the General Plan designation. The improvement is important to fully implement the circulation network to support existing and planned land uses.

Avoidance Minimization and/or Mitigation Measures

The project would not result in any impacts to State, regional, or local planning programs. Therefore, no avoidance, minimization, and/or mitigation measures are required.

Park and Recreation Facilities

Affected Environment

Section 4(f) resources include publicly owned parks and recreational areas; wildlife or waterfowl refuges; historic sites on or eligible for the *National Register of Historic Places*; and archaeological sites that warrant preservation in place. Potential cultural resources are discussed later in this document under cultural resources.

Rancho Mission Viejo Riding Park at San Juan Capistrano

The Rancho Mission Viejo Riding Park at San Juan Capistrano is an equestrian sports center located in the southwestern quadrant of the SR-74/La Pata Avenue Intersection. In January 2010, the City of San Juan Capistrano acquired the property, as well as other adjacent open space land. The use at the Rancho Mission Viejo Riding Park at San Juan Capistrano (and associated open space area), will remain the same as when it was in private ownership. The facility has hosted major equestrian competitions and the Rancho Mission Viejo rodeo, which is open to the public. Since the property is in public ownership, the park would be a Section 4(f) resource. (Section 4(f) is further discussed in Appendix A.) Figure 17 depicts the area transferred to the City of San Juan Capistrano. All required right-of-way in this quadrant of the intersection has been dedicated to the County of Orange prior to the close of escrow on the Riding Park.

Master Plan Bikeways and Trails

The County of Orange General Plan has designated two bikeways and a proposed hiking trail within the project limits. Only one of these is partially constructed. A Class II bikeway is designated on Antonio Parkway and is constructed north of the project limits. A Class II facility is in a typical highway shoulder that is signed and marked for bike lanes with no vehicle parking allowed. The County of Orange standards identify that the roadway shoulder should be eight feet wide for major arterial highways and ten feet wide for a primary arterial highway.

The remaining two facilities are designated on the County of Orange General Plan but have not been implemented. A Class I trail (off-road) is designated on the *Master Plan of Bikeways* as a proposed facility parallel to San Juan Creek. The third

recreational facility planned for this area is a riding and hiking trail on the south side of San Juan Creek.

Environmental Consequences

Build Alternative "Proposed Project" (Preferred Alternative)

Rancho Mission Viejo Riding Park at San Juan Capistrano

As indicated above, the Rancho Mission Viejo Riding Park at San Juan Capistrano was conveyed to the City of San Juan Capistrano in January 2010. All necessary roadway right-of-way for La Pata Avenue was transferred to the County of Orange prior to the closure of escrow. The roadway widening would not adversely affect the ongoing recreational activities at the park. As shown in Figure 17, Rancho Mission Viejo Riding Park at San Juan Capistrano, the park has an internal roadway surrounding the field where the recreational activities take place. This internal roadway would not be affected by the project. The proposed improvements would not extend as far south as the park entrance. Therefore, the active park area would remain undisturbed. The proposed improvements would improve access to the park from areas to the north by improving circulation at the Antonio Parkway/La Pata Avenue/SR-74 intersection.

The *Noise Study Report* prepared for this project, which is further discussed later in this document under Noise, evaluates the potential for noise impacts on the park. The study determines that the widening of La Pata Avenue would not result in noise levels exceeding the noise abatement criteria at the park.

The improvements would not adversely affect other characteristics of the park. The improvements would not require the removal of vegetation at or surrounding the park. There is limited vegetation along the roadway in the vicinity of the park. Therefore, there would not be a substantial change in the visual characteristics of the park. The improvements would not change alignment of the existing road or the characteristics of the type of trips using the roadway. It would also not change the area served by the roadway. The drainage from the roadway would not enter the park; therefore, there would not be water quality impacts on the park. The project would not have secondary impacts to the park. The overall function of the park would not change due to the widening of the 900-foot segment of La Pata Avenue south of the SR-74 intersection.

The proposed project would not cause substantial proximity impacts (constructive use) on the Rancho Mission Viejo Riding Park at San Juan Capistrano because the widening project would not substantially impair the activities, features, or attributes of the park.

Master Plan Bikeways and Trails

The Class II bikeway on Antonio Parkway north of the project limits would be considered a Section 4(f) resource because it is in public ownership. The proposed improvements would not result in any impacts to the existing facility. Since no modifications to the existing facility are required, construction would occur south of the existing bikeway. Short-term impacts to the existing bikeway (the Section 4(f) resource) are not anticipated. Though it is not an official bikeway, bicyclists that choose to ride on the roadway would experience the construction zone as they leave



Rancho Mission Viejo Riding Park at San Juan Capistrano

Figure 17

Antonio Parkway Widening

Source: Huitt Zollars 2009

the existing bikeway. However, since there is no bikeway in this location, it is not considered a Section 4(f) resource. The Traffic Management Plan would identify signage and other measures to minimize conflicts associated with construction activities. In the long-term, the project would have a beneficial effect because it would provide for a continuation of the trail.

The Class I bike trail and the riding and hiking trail are shown on the General Plan but are only conceptual in nature. No steps toward implementation have been taken. There are no easements granted for implementation of the facilities. Therefore, the provisions of Section 4(f) are not triggered. The project does provide for future implementation of these facilities by providing access under the bridge that would accommodate the construction of the trails.

No Build (No Action) Alternative

Rancho Mission Viejo Riding Park at San Juan Capistrano

The No Build Alternative would not have any impacts on the Rancho Mission Viejo Riding Park at San Juan Capistrano because there would be no modifications to the roadway in this vicinity.

Master Plan Bikeways and Trails

The No Build Alternative would not provide for the extension of the Class II bikeway that currently exists north of the project limits and is designated on the *Orange County General Plan* as extending south through the project limits. The No Build Alternative would not provide for the future implementation of the bike trail and riding and hiking trail parallel to San Juan Creek; however, it would not preclude or obstruct the future implementation of the trails in conjunction with the land use development.

Avoidance Minimization and/or Mitigation Measures

The project would not result in any impacts to parks or recreational facilities. Therefore, no avoidance, minimization, and/or mitigation measures are required.

GROWTH

Regulatory Setting

Under NEPA, a federal agency must evaluate the direct and indirect effects of a proposed action. Indirect effects are those that are caused by the proposed action but will occur later in time or further removed in distance, but are still reasonably foreseeable. Indirect effects may include “growth inducing effects” and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on environmental resources.

The Council on Environmental Quality (CEQ) NEPA regulations, 40 CFR 1508.8, define indirect effects including those that are growth related.

Affected Environment

The land adjacent to the roadway is currently undeveloped but approved for urban uses. In November 2004, the Orange County Board of Supervisors approved the

Ranch Plan. This General Plan Amendment provided for the development of 14,000 residential units and 5.2 million square feet of commercial/office/employment uses. The western boundary of the Ranch Plan extends to jurisdictional limits of unincorporated Orange County with the cities of San Juan Capistrano and San Clemente. The northern limits are the Ladera Ranch and Coto de Caza Planned Communities. It extends east to the General Thomas F. Riley Wilderness Park and the Cleveland National Forest. Marine Corps Base, Camp Pendleton is to the south. The locations of these uses are shown on Figure 12. Given the size of the Ranch Plan (22,815 acres) a number of these uses are quite distant from Antonio Parkway.

Adjacent land uses include the community of Ladera Ranch and the City of San Juan Capistrano. The southern boundary of the Ladera Ranch planned community is located immediately north of the project's northern terminus. Ladera Ranch is mostly built out and contains approximately 8,100 dwelling units and approximately 125 acres of Urban Activity Center uses. The City of San Juan Capistrano is located approximately one mile to the west of Antonio Parkway. While the city provides a number of diverse uses, low-density single-family homes are the uses nearest the Antonio Parkway project.

Environmental Consequences

The Department, in conjunction with the Federal Highway Administration and the federal Environmental Protection Agency, developed a guidance which was prepared to address California's specific challenges relating to growth-related impacts and focusing on the influence that transportation projects may have on growth and development. A "first cut screening" is performed to help determine the likely growth-potential effect of a proposed project and also to determine whether further analysis of issues is warranted. The "first cut screening" asks the following questions:

- To what extent would travel times, travel cost, or accessibility to employment, shopping, or other destinations be changed? Would this change affect travel behavior, trip patterns, or the attractiveness of some areas to development over others?
- To what extent would change in accessibility affect growth or land use change—its location, rate, type, or amount?
- Is the projected growth "reasonably foreseeable"?
- To what extent would resources of concern be affected by this growth or land use change?

For the evaluation of potential growth impacts, each of the "first cut screening" questions have been answered.

Build Alternative "Proposed Project" (Preferred Alternative)

Travel and Accessibility

The proposed project is located within an area that has been approved for urban development. When built out, this approved development, known as the Ranch Plan, would generally provide a balance of residential and employment uses. Antonio Parkway would be one of the main arterial highways serving this development. In

addition, Antonio Parkway currently provides access to employment centers to the north in the City of Rancho Santa Margarita and provides the only arterial that connects the communities in southeast Orange County. The project would improve accessibility to the area by providing additional lanes to serve the projected long-term travel demand in the region. However, since Antonio Parkway is an existing roadway, the project would not open new travel routes that would substantially alter travel behavior.

Accessibilities Affect on Growth

Though the widened Antonio Parkway would serve new growth, the improved and additional accessibility would not substantially influence the location, rate, or type of growth. Antonio Parkway would continue to serve the same area in southeast Orange County and trips traveling on SR-74 from Riverside County that currently use Antonio Parkway to access southeast Orange County. Though the proposed project would provide an important component of the local transportation infrastructure, the overall effect on planned growth is not expected to be substantial because local planning has assumed the widening of Antonio Parkway as part of long-range planning efforts.

The proposed project would not provide excess capacity that would support further intensification of the land uses in the vicinity; instead, the roadway network would provide for improved operational performance and would support existing and approved development.

The widening of Antonio Parkway would not be expected to promote growth in Riverside County because of the distance between the roadway and closest areas where development could occur in Riverside County. In addition, commuting to southern Orange County from there (or the reverse commute) can be long and difficult due to the mountain range (Santa Ana Mountains), the long distance, the amount of vehicular traffic, and the lack of major highways.

Foreseeable Growth

This area in Orange County will experience substantial growth as the Ranch Plan is implemented. However, this is growth that has been approved as part of a separate action by the Orange County Board of Supervisors and has been assumed as part of the local and regional growth projections.

The development of the Ranch Plan is not only consistent with the *Orange County General Plan*, the approved development has been incorporated into the regional growth forecasts. The Southern California Association of Governments (SCAG) has planned for substantial growth in this portion of Orange County. The planned growth assumes an influx of population, housing, and jobs to the region. The intent is to provide housing to help meet the projected southern California housing demand and to provide an employment base that would serve the local communities. SCAG policy emphasizes the need for a jobs-housing balance as a means of reducing the impact on the circulation network and achieves air quality goals. The planned growth is intended to help meet this goal. It should be noted, that when approved the growth levels for the Ranch Plan were below the levels assumed by SCAG for this region.

Impacts on Resources of Concern

Based on information in this EA, biological features are the primary resource of concern. The impacts are not substantial and, through coordination with the regulatory and resource agencies, the potential impacts have been avoided, minimized or addressed with mitigation measures. The proposed project is expected to alleviate both existing congestion and anticipated increased traffic associated with the approved growth. Resources of concern are not anticipated to be affected in this context.

Based on the Department's first cut screening criteria, no further analysis with respect to growth is required for this project.

No Build (No Action) Alternative

The No Build Alternative would not provide any improvements that could influence growth or the distribution of growth in the region.

Avoidance Minimization and/or Mitigation Measures

The project would not result in any growth impacts. Therefore, no avoidance, minimization, and/or mitigation measures are required.

COMMUNITY IMPACTS

Community Character and Cohesion

Regulatory Setting

The National Environmental Policy Act of 1969, as amended (NEPA), established that the federal government will use all practicable means to ensure for all Americans' safe, healthful, productive, and aesthetically and culturally pleasing surroundings [42 U.S.C. 4331(b)(2)]. The Department, as assigned by FHWA, in its implementation of NEPA (23 U.S.C. 109[h]), directs that final decisions regarding projects be made in the best overall public interest. This requires taking into account adverse environmental impacts, such as destruction or disruption of human-made resources, community cohesion, and the availability of public facilities and services.

Affected Environment

Land Use Characteristics

As discussed above, the roadway traverses an undeveloped portion of the Rancho Mission Viejo property. Historically, land uses have included both ranching and agricultural uses. In the more recent past, portions of the project site have been leased for various uses including commercial nursery operations, equestrian uses, communications facilities, and storage and maintenance yards. This area is slated for urban development.

The Ladera Ranch Planned Community is the closest development, located immediately north of the project limits. This development (8,100 dwelling units and approximately 125 acres of Urban Activity Center uses) is nearly built out. A few

custom home sites in the southernmost neighborhood of Covenant Hills remain undeveloped.

Demographics

The U.S. Census Bureau, in the Year 2000 Census Summary File, provides demographic information for Orange County as a whole, as well as the project study area. The project site is located in three census tracts (see Figure 18 for census tract boundaries). A review of the 2000 census data for census tracts 320.52, 320.56, and 320.23 reveals the population in the three affected census tracts to be predominately white with incomes above the County average. It ranges from 81 percent white (Tract 320.56) to 96 percent white (Tract 320.52). The median income for these tracts was also higher than the Countywide average in the Year 2000. The median income for the three tracts ranged from \$102,068 to \$114,721, compared to \$58,820 countywide.

Community Services and Facilities

There are no community facilities within the project limits. A fire station for the Orange County Fire Authority (OCFA) is proposed at the intersection of Antonio Parkway and the future "C" Street. An existing fire station is located approximately 2¼ miles north of the project study area, on Crown Valley Parkway. Located at 58 Station Way, just east of the Crown Valley Parkway/Antonio Parkway intersection, Fire Station 58 serves Ladera Ranch and the surrounding area, including the project study area.

Though no schools exist in the project study area, the following schools are located in the adjacent communities:

- Oso Grande Elementary School is located at 29001 Sienna Parkway in Ladera Ranch, approximately two miles northwest of Antonio Parkway. The school provides classes for kindergarten through fifth grade.
- Ladera Ranch School is located at 29551 Sienna Parkway in Ladera Ranch. This school serves kindergarten through eighth grade. The school is located approximately two miles northwest of Antonio Parkway.
- Chaparral Elementary School is located at 30251 Sienna Parkway in Ladera Ranch, approximately 2.5 miles northwest of Antonio Parkway. The school provides classes for kindergarten through fifth grade.
- Harold Ambuehl Elementary School is located at 28001 San Juan Creek Road in San Juan Capistrano, approximately 2.6 miles west of Antonio Parkway. The school serves kindergarten through fifth grade.
- San Juan Hills High School is located at 29211 Vista Montana in San Juan Capistrano and is approximately 0.75 mile south of the SR-74/La Pata Avenue intersection. Currently, the school operated with grade levels 9–11. In 2010, the school will operate with grade levels 9–12.
- St. Margaret's Episcopal School is a private school located at 31641 La Novia in San Juan Capistrano. The school is located approximately 2.5 miles from the project site and serves pre-school through 12th grade.

The closest library is also located in Ladera Ranch at 29551 Sienna Parkway, Ladera Ranch. The library was designed to serve a community of 60,000.

Most of the neighborhoods within Ladera Ranch have been designed to have private community facilities, such as club houses maintained by the homeowners associations. There is a large sports park located on Crown Valley Parkway just east of the Arroyo Trabuco. This is located approximately 3¼ miles northwest of the project site.

There are no court houses, regional community centers or other services in close proximity to the project site. The closest hospital is Mission Hospital in the City of Mission Viejo, located at 27700 Medical Center Road, Mission Viejo. This is a distance of approximately six miles from Antonio Parkway.

Environmental Consequences

Build Alternative “Proposed Project” (Preferred Alternative)

Social impacts are those that in some way affect community cohesion. According to the Department’s *Community Impact Assessment Handbook*:

Community cohesion is the degree to which residents have a ‘sense of belonging’ to their neighborhood, a level of commitment, or a strong attachment to neighbors, groups, and institutions, usually a result of continued association over time. Cohesion refers to the degree of interaction among the individuals, groups, and institutions that make up a community.

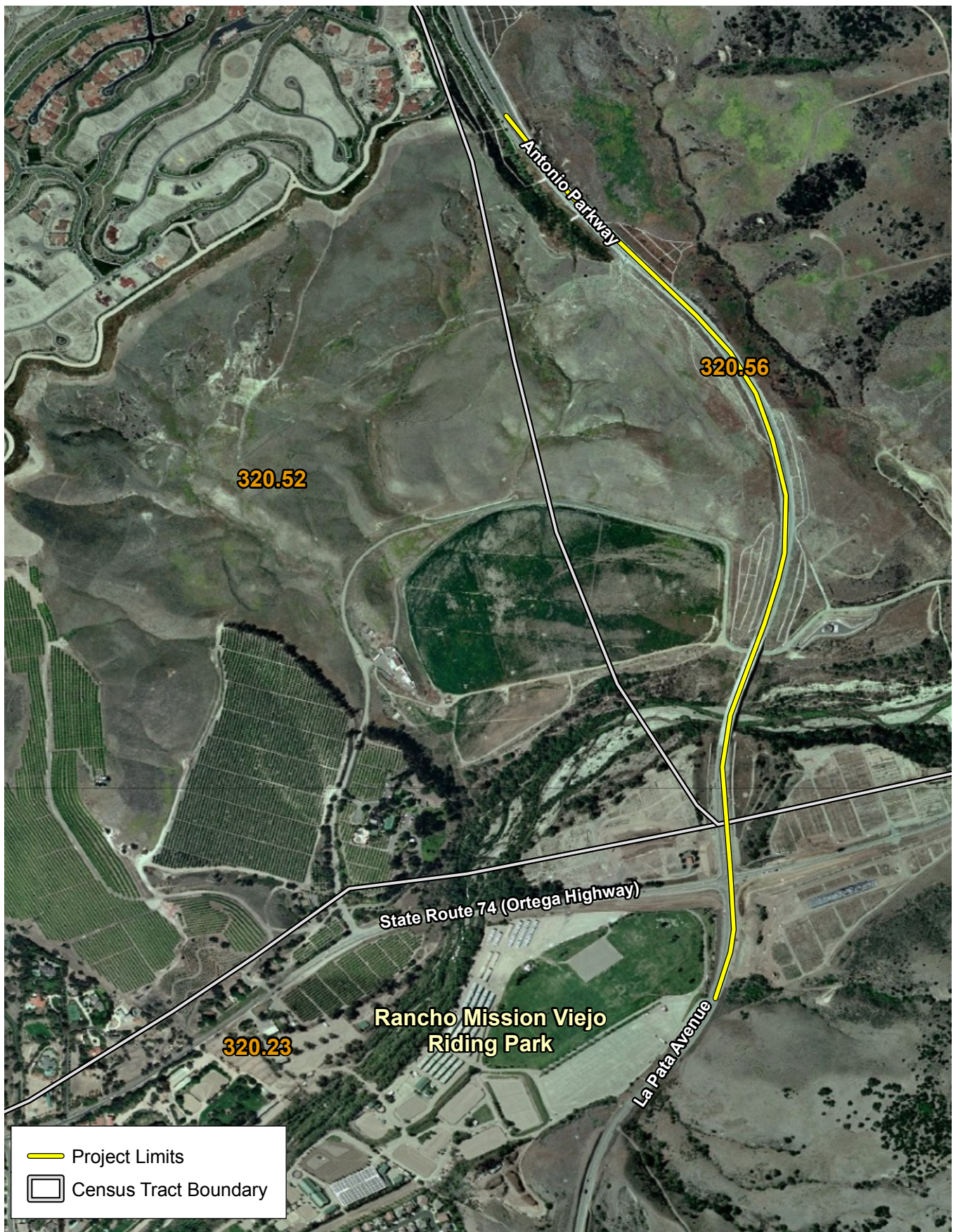
Cohesive communities are associated with specific social characteristics which may include long average lengths of residency, frequent personal contact, ethnic homogeneity, high levels of community activity, and shared goals.

Land Use Characteristics

The widening of Antonio Parkway would not have an adverse affect on the land use characteristics of the community. The area it would be traversing is undeveloped other than the existing roadway. The future community (the Ranch Plan) has been designed with the recognition that Antonio Parkway would be constructed to full arterial highway standards.

The existing development of Ladera Ranch would not be adversely affected by the widening of Antonio Parkway. The roadway through the community has already been developed to the full six-lane standards. Implementation of the proposed project would provide a consistent roadway cross-section along Antonio Parkway and would provide a continuation of the Class II bikeway that is constructed within the Ladera Ranch Planned Community. The alignment and design of Antonio Parkway was selected by the Orange County Board of Supervisors at the same time the Ladera Ranch Planned Community was approved. Therefore, the design of the land uses took into consideration the roadway would be a major arterial highway (six-lanes, divided) that would serve intraregional travel.

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Census Tract Boundaries

Antonio Parkway Widening

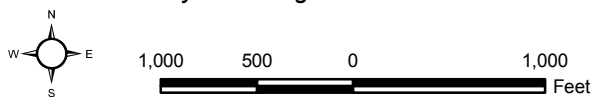


Figure 18

Demographics

There is no established community in the vicinity of the roadway that would be adversely affected by the proposed widening of Antonio Parkway. The area adjacent to the roadway is open space. As noted above, the residents within the census tracts that contain this segment of Antonio Parkway are predominately white and are high-income households. There would be no direct effects to any low income or minority populations.

Community Services and Facilities

The proposed project would generally occur within the right-of-way of existing Antonio Parkway. Although implementation of the proposed project would require minor amounts of right-of-way, none of the affected properties are community facilities (i.e., school, park, library, fire or police station, community center). Additionally, the proposed project would not limit access or redirect traffic circulation in a manner that would impede access to any of the existing facilities from the existing or planned residential neighborhoods. Therefore, the proposed project would not separate residences from community facilities, nor would it decrease public access. No impacts to services and facilities that would affect community cohesion would occur.

No Build (No Action) Alternative

The No Build Alternative would not impact community cohesion. No facilities would be displaced and no planned community facilities would be precluded with this alternative.

Avoidance, Minimization, and/or Mitigation Measures

The proposed project would not result in any impacts to community character or cohesion. No minimization and/or mitigation measures would be required.

Utilities and Emergency Services

Affected Environment

Utilities

The following service providers either serve or have facilities within the project right-of-way:

Water:	Santa Margarita Water District and Capistrano Valley Water District (CVWD)/City of San Juan Capistrano
Sewer:	Santa Margarita Water District
Gas:	The Gas Company
Electric:	San Diego Gas and Electric
Telecommunications:	AT&T and Cox Cable

Emergency Services

The Orange County Fire Authority (OCFA) provides fire protection and emergency medical services to the project study area. As previously indicated, there is a fire station approximately 2¼ miles north of the project limits and a station is proposed in the vicinity of the intersection of Antonio Parkway and the future “C” Street.

The Orange County Sheriff’s Department (OCSD) provides police protection to the area. The project site is located within the OCSD South Operations Area, which covers approximately 136 square miles. The OCSD headquarters for the South Operations is located at 11 Journey in Aliso Viejo.

In addition to OCSD, the California Highway Patrol (CHP) is responsible for traffic law enforcement and traffic collision investigation within the project study area. As a secondary responsibility, the CHP provides mutual aid assistance to OCSD in times of emergency, or when the department’s needs exceed its existing capabilities. The project site is within the Capistrano Area of the CHP, which is located at 32951 Camino Capistrano in the City of San Juan Capistrano.

Environmental Consequences

Build Alternative “Proposed Project” (Preferred Alternative)

Utilities

The following utility modifications would be required:

- Approval of grading on the Santa Margarita Water District (SMWD) easement;
- Approval of grading on the Capistrano Valley Water District (CVWD)/City of San Juan Capistrano easement;
- Relocation of existing San Diego Gas & Electric (SDG&E) utility lines; and
- Relocation of existing AT&T utility lines.

These utilities are distribution lines and could be relocated with standard engineering practices. This would allow the relocation of all the utilities without interruption of service. In addition, provisions have been incorporated into the design to allow for the extension of utilities that would serve the Ranch Plan area. The utility plans are provided in Figures 19a through 19h.

Emergency Services






Ultimately, the project would enhance roadway capacity. This would have a beneficial effect on the provision of emergency services. The project would not require the closure of the roadway; therefore, there would be minimal impacts during construction. A Traffic Management Plan would be prepared, in accordance with County of Orange requirements during the design phase to ensure that emergency access is maintained. None of the roadways in the project study area are designated as emergency evacuation routes.

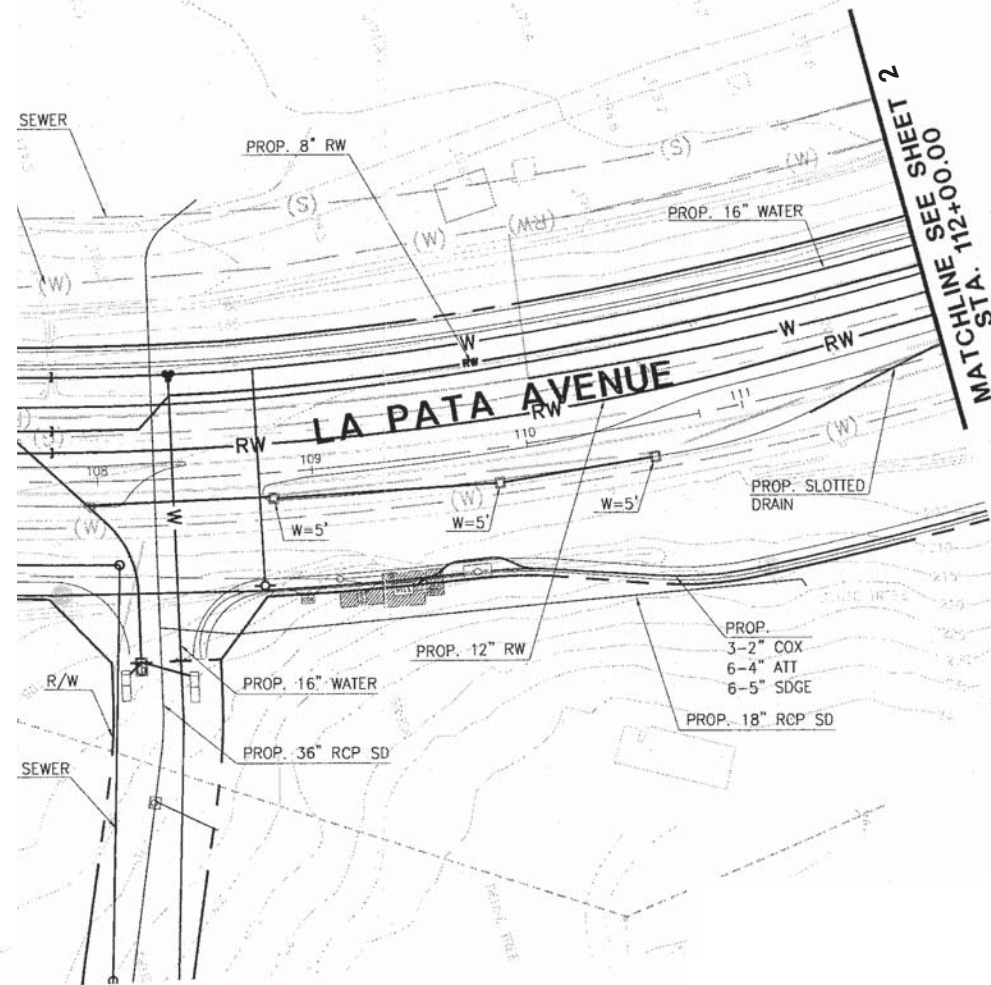
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ABBREVIATIONS

COMM	COMMUNICATION
ELEC	ELECTRIC
EXIST	EXISTING
OH-E	OVERHEAD ELECTRIC
OH	OVERHEAD
PROP	PROPOSED
RCP	REINFORCED CONCRETE PIPE
R/W	RIGHT OF WAY
RW	RECYCLED WATER
S	SANITARY SEWER
SD	STORM DRAINAGE
TELE	TELEPHONE
W	WATER

LEGEND

	EXISTING UTILITIES
	PROPOSED UTILITIES
	PROPOSED CABLE BOX
	PROPOSED SDGE, AT&T, & COX VAULT
	PROPOSED AT&T BOX

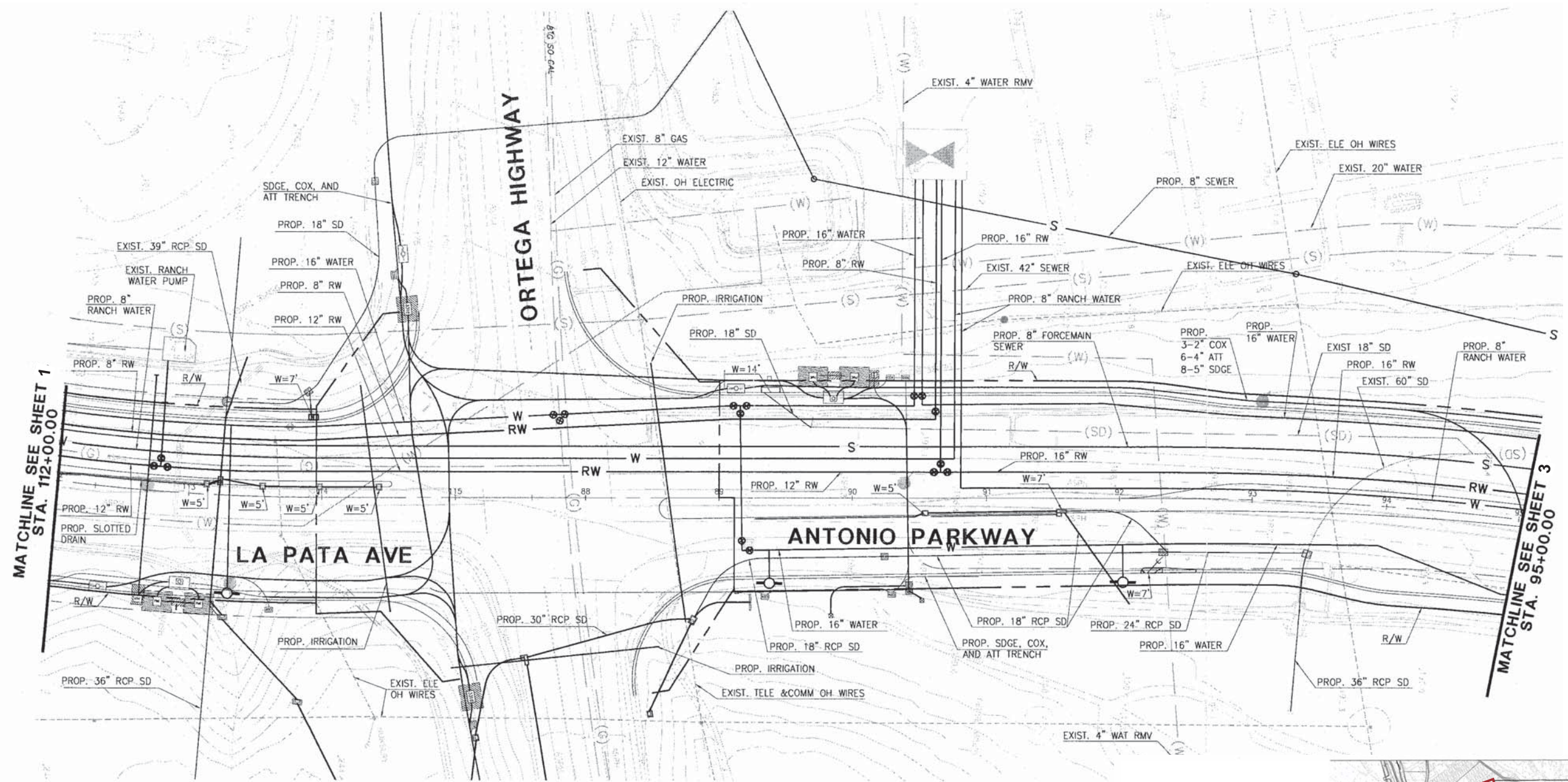


Utility Plans

Antonio Parkway Widening

Source: Huitt Zollars 2008

Figure 19a

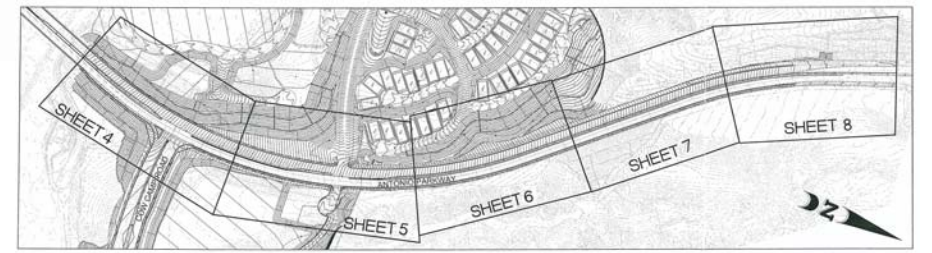
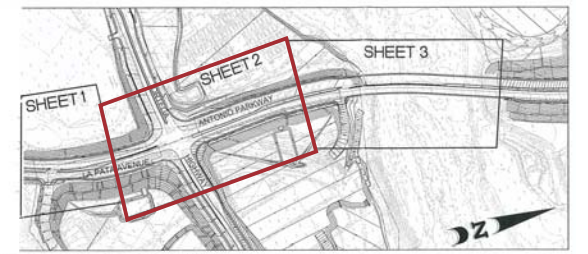
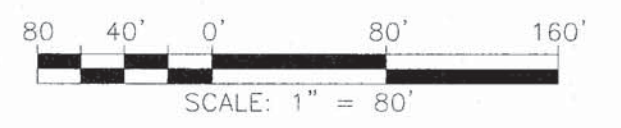


ABBREVIATIONS

COMM.	COMMUNICATION
ELEC.	ELECTRIC
EXIST.	EXISTING
OH	OVERHEAD
OH-E	OVERHEAD ELECTRIC
PROP	PROPOSED
RCP	REINFORCED CONCRETE PIPE
R/W	RIGHT OF WAY
RW	RECYCLED WATER
S	SANITARY SEWER
SD	STORM DRAINAGE
TELE	TELEPHONE
W	WATER

LEGEND

---	EXISTING UTILITIES
---	PROPOSED UTILITIES
COX	PROPOSED CABLE COX
SDGE, AT&T, & COX VAULT	PROPOSED SDGE, AT&T, & COX VAULT
AT&T BOX	PROPOSED AT&T BOX

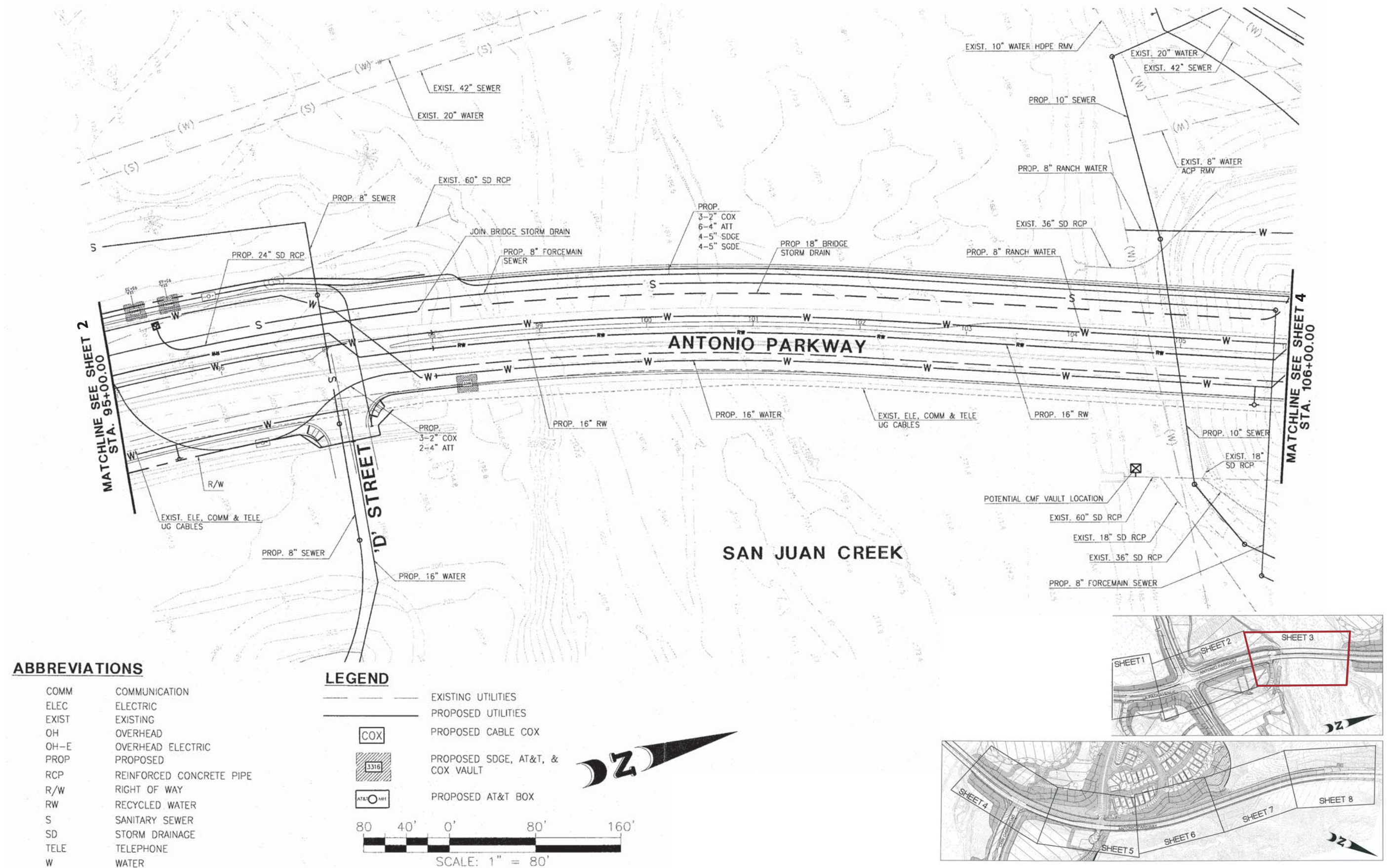


Utility Plans

Antonio Parkway Widening

Figure 19b

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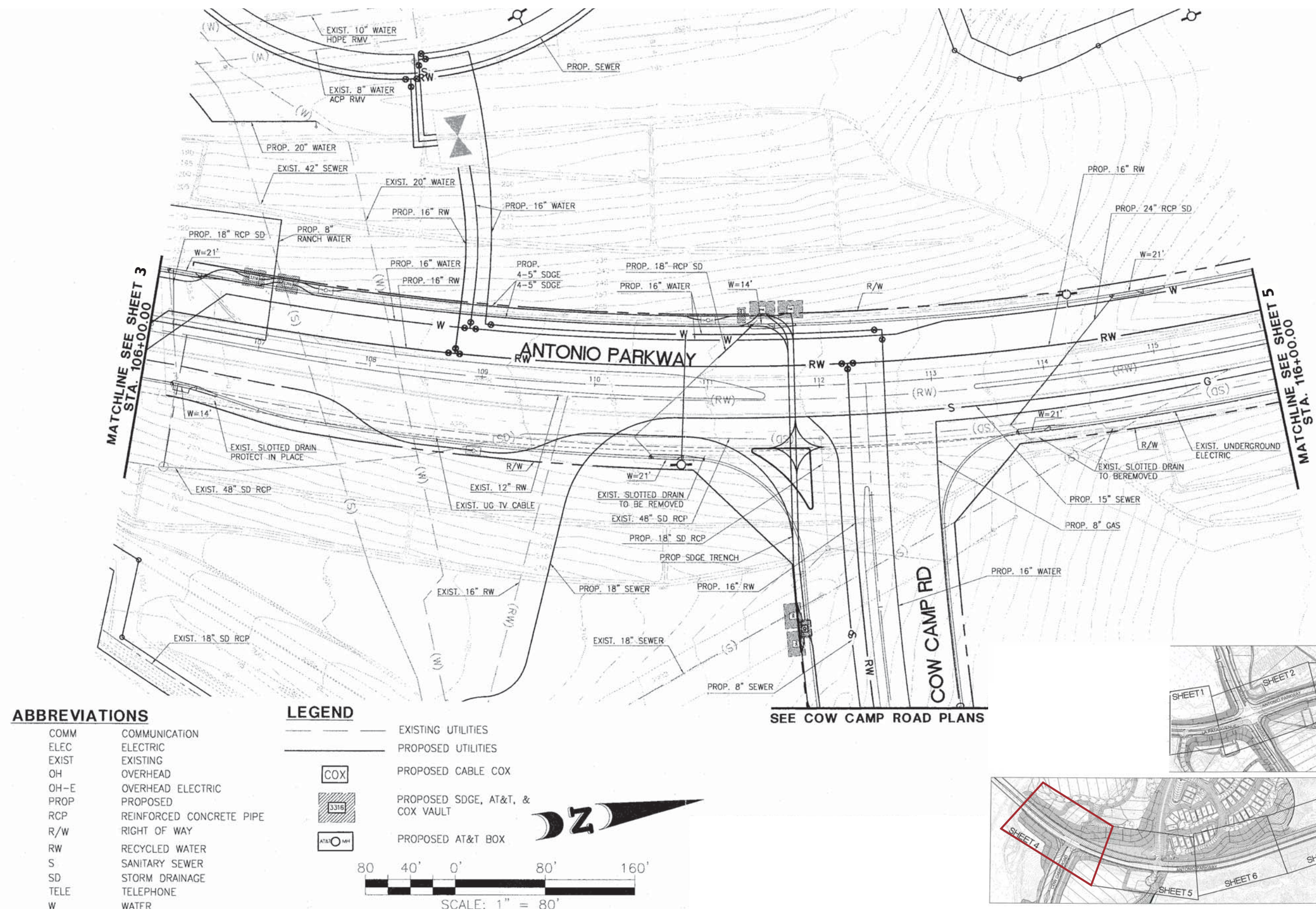


Utility Plans

Antonio Parkway Widening

Source: Huitt Zollars 2008

Figure 19c



Utility Plans

Antonio Parkway Widening

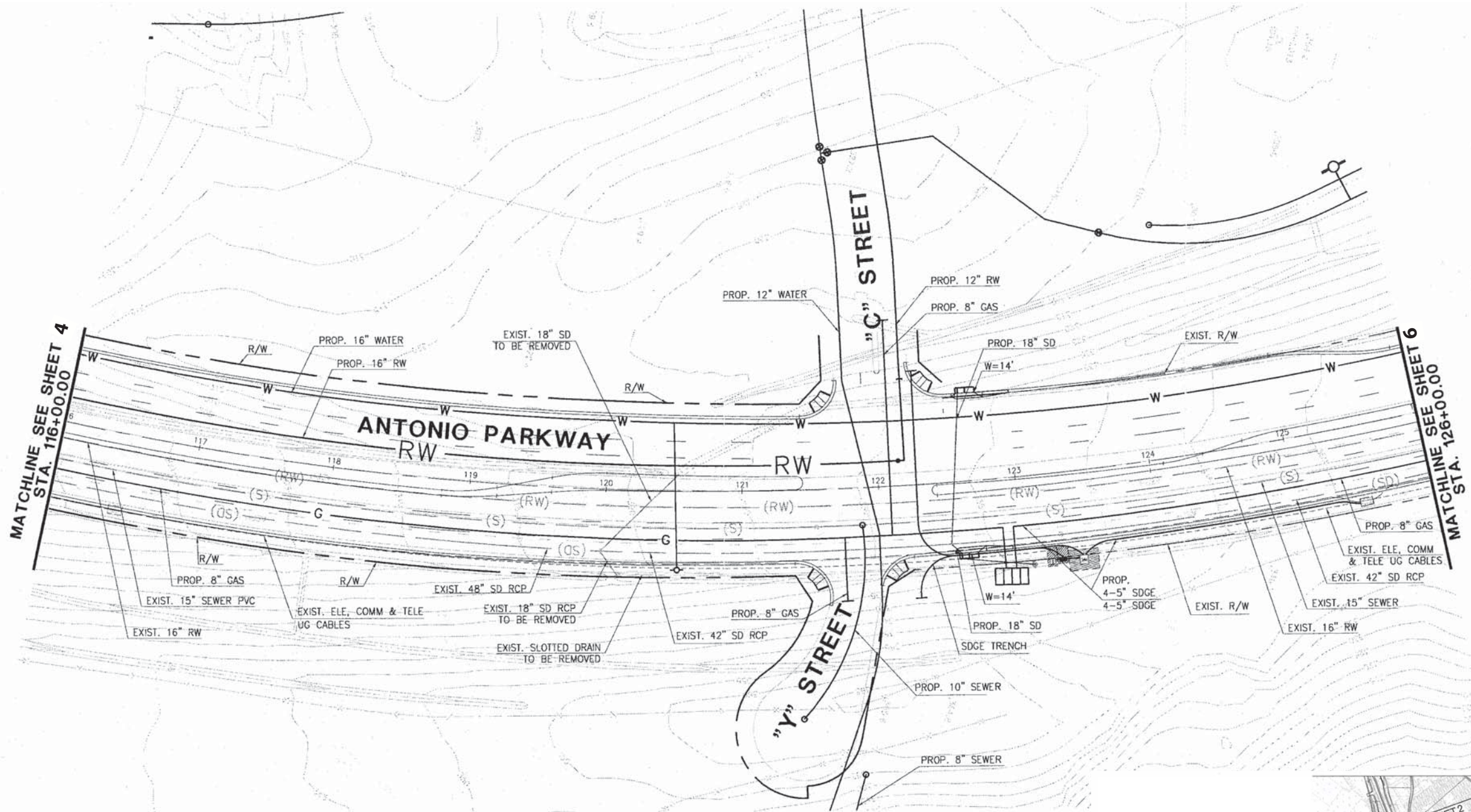
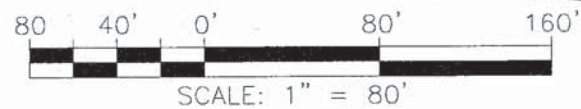
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ABBREVIATIONS

COMM	COMMUNICATION
ELEC	ELECTRIC
EXIST	EXISTING
OH	OVERHEAD
OH-E	OVERHEAD ELECTRIC
PROP	PROPOSED
RCP	REINFORCED CONCRETE PIPE
R/W	RIGHT OF WAY
RW	RECYCLED WATER
S	SANITARY SEWER
SD	STORM DRAINAGE
TELE	TELEPHONE
W	WATER

LEGEND

---	EXISTING UTILITIES
---	PROPOSED UTILITIES
COX	PROPOSED CABLE COX
3316	PROPOSED SDGE, AT&T, & COX VAULT
AT&T MRY	PROPOSED AT&T BOX



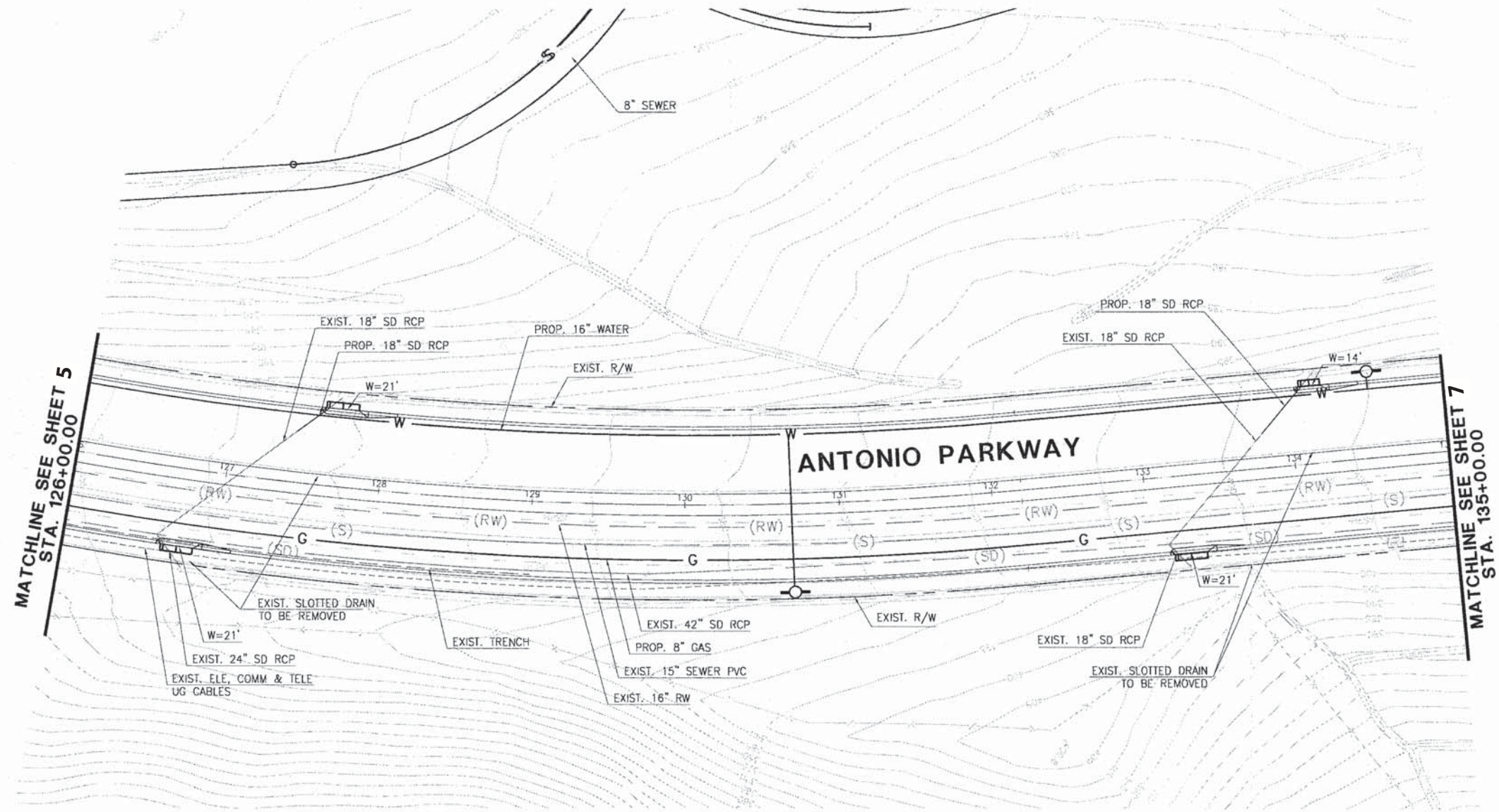
Utility Plans

Antonio Parkway Widening

Source: Huitt Zollars 2008

Figure 19e

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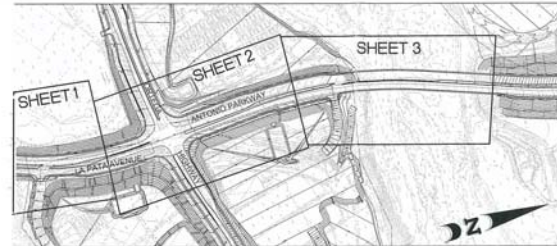
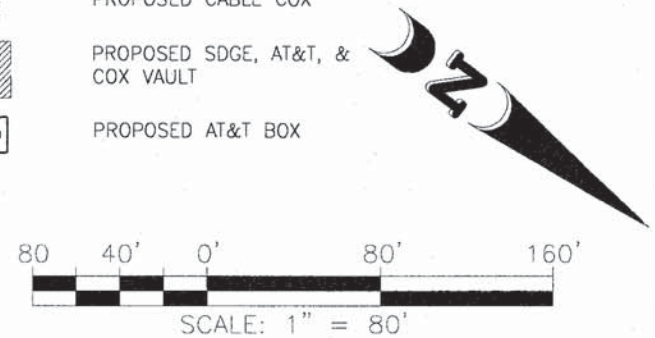


ABBREVIATIONS

COMM	COMMUNICATION
ELEC	ELECTRIC
EXIST	EXISTING
OH	OVERHEAD
OH-E	OVERHEAD ELECTRIC
PROP	PROPOSED
RCP	REINFORCED CONCRETE PIPE
R/W	RIGHT OF WAY
RW	RECYCLED WATER
S	SANITARY SEWER
SD	STORM DRAINAGE
TELE	TELEPHONE
W	WATER

LEGEND

---	EXISTING UTILITIES
---	PROPOSED UTILITIES
COX	PROPOSED CABLE COX
3316	PROPOSED SDGE, AT&T, & COX VAULT
AT&T MH	PROPOSED AT&T BOX



Utility Plans

Antonio Parkway Widening

Source: Huitt Zollars 2008

Figure 19f

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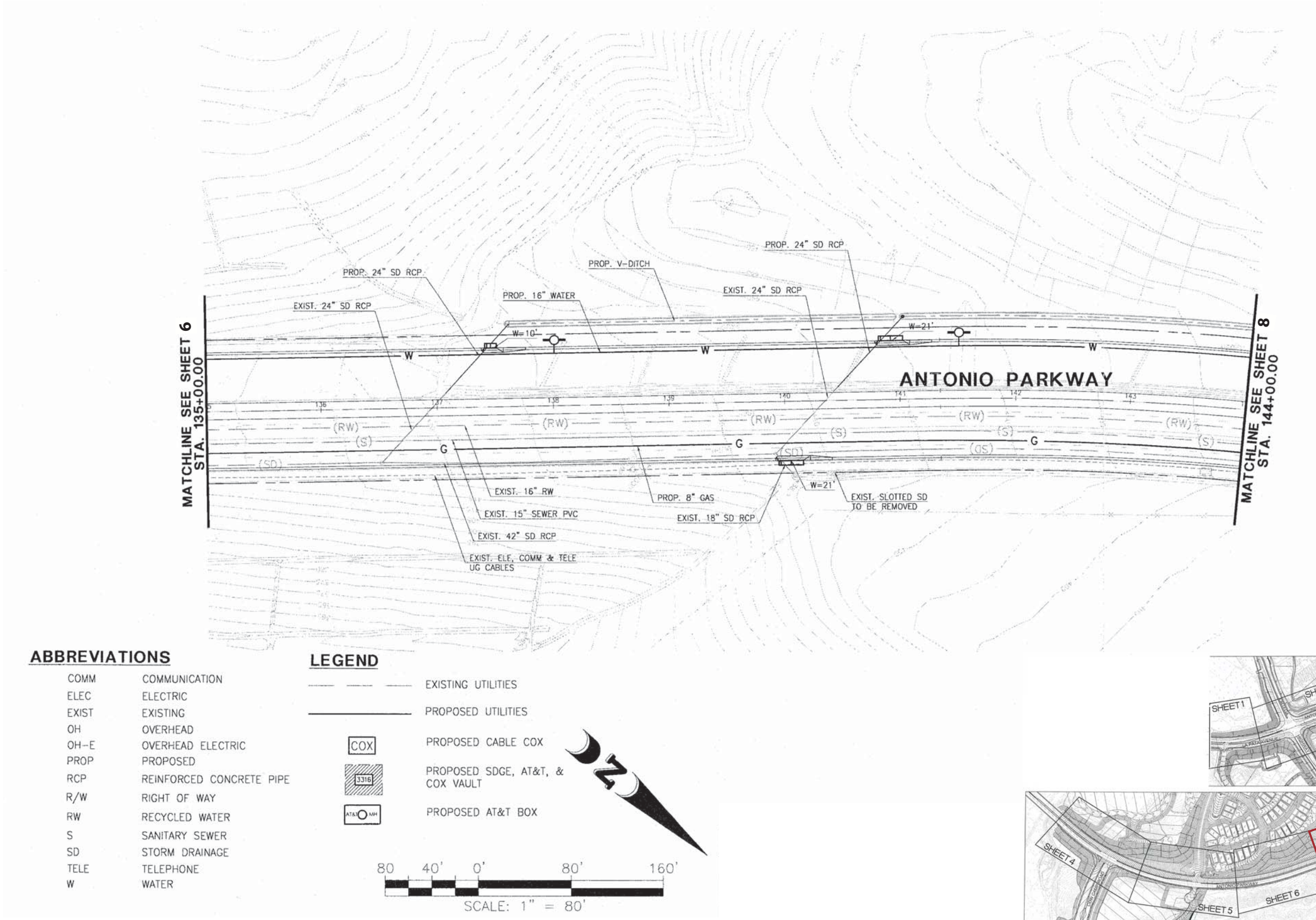


Figure 19g

No Build (No Action) Alternative

The No Build Alternative would not require the relocation of any utilities because no improvements would be implemented. The No Build Alternative may have indirect impacts on emergency services because the Antonio Parkway/La Pata Avenue/SR-74 intersection would operate at a deficient level of service. During peak hours, this could result in an increase in response time for service providers.

Avoidance, Minimization, and/or Mitigation Measures

The following are standard requirements for construction projects, which serve to avoid or minimize impacts.

Utilities

- U-1 During project design, Orange County Public Works will coordinate with all affected utility service providers on the precise requirements for relocating the utilities and providing for the extension of utilities within the Antonio Parkway right-of-way.

Emergency Services

- ES-1 Consistent with County of Orange standard provisions, a Traffic Management Plan would be prepared to ensure that emergency access is maintained during construction of the proposed project. A component of the Traffic Management Plan would be to coordinate with the emergency service providers to ensure their operations can be adjusted during construction, if necessary.

Traffic and Transportation/Pedestrian and Bicycle Facilities

Regulatory Setting

The Department, as assigned by FHWA, directs that full consideration should be given to the safe accommodation of pedestrians and bicyclists during the development of federal-aid highway projects (see 23 CFR 652). It further directs that the special needs of the elderly and the disabled must be considered in all federal-aid projects that include pedestrian facilities. When current or anticipated pedestrian and/or bicycle traffic presents a potential conflict with motor vehicle traffic, every effort must be made to minimize the detrimental effects on all highway users who share the facility.

In July 1999, the U.S. Department of Transportation (USDOT) issued an Accessibility Policy Statement pledging a fully accessible multimodal transportation system. Accessibility in federally-assisted programs is governed by the USDOT regulations (49 CFR part 27) implementing Section 504 of the Rehabilitation Act (29 U.S.C. 794). FHWA has enacted regulations for the implementation of the 1990 Americans with Disabilities Act (ADA), including a commitment to build transportation facilities that provide equal access for all persons. These regulations require application of the ADA requirements to Federal-aid projects, including Transportation Enhancement Activities.

Affected Environment

Traffic and Transportation

The information in this section is based upon the *Antonio Parkway Traffic Study* prepared in November 2009. The report addresses the project's potential effect on traffic and circulation, both during construction and after project completion.

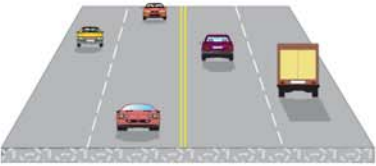
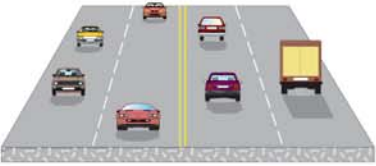




As previously noted, the project is designated as a major arterial highway (six-lane, divided roadway) in both the *Orange County General Plan* and the *Master Plan of Arterial Highways* (MPAH). The County of Orange Circulation Element identifies a level of service D as the standard for arterial highways within unincorporated Orange County.

The performance criteria used for evaluating traffic volumes and capacities on the study area street system are based on peak hour intersection volumes. Using peak hour intersection turn movement volumes and the intersection lane geometry, intersection capacity utilization (ICU) values are calculated for each of the AM and PM peak hours. The ICU values represent volume/capacity (V/C) ratios for these time periods and are a measure of system performance. Since SR-74 is on the State Highway System, the Antonio Parkway/SR-74 intersection has also been evaluated using the Highway Capacity Manual (HCM) delay based procedure for determining level of service (LOS).

Table 5 summarizes the criteria used for the intersection LOS calculations and the significance criteria for intersections based on ICU contribution. The delay ranges for each LOS are also listed here. Table 6 describes traffic flow quality for different V/C and vehicle delay ranges. Traffic levels of service are designated "A" through "F", with LOS "A" representing free flow conditions and LOS "F" representing severe traffic congestion. A graphic presentation of the various levels of service is presented in Figure 20.

LEVELS OF SERVICE

for Multi-Lane Highways

Level of Service	Flow Conditions	Operating Speed (mph)	Technical Descriptions
A		60	Highest level of service. Traffic flows freely with little or no restrictions on maneuverability. No delays
B		60	Traffic flows freely, but drivers have slightly less freedom to maneuver. No delays
C		60	Density becomes noticeable with ability to maneuver limited by other vehicles. Minimal delays
D		57	Speed and ability to maneuver is severely restricted by increasing density of vehicles. Minimal delays
E		55	Unstable traffic flow. Speeds vary greatly and are unpredictable. Minimal delays
F		<55	Traffic flow is unstable, with brief periods of movement followed by forced stops. Significant delays

Levels of Service

Figure 20

Antonio Parkway Widening

Table 5
Intersection Performance Criteria

I. PEAK HOUR INTERSECTION VOLUMES – ICU PROCEDURE															
<p>ICU values calculated as follows:</p> <ul style="list-style-type: none"> • Saturation Flow Rate: 1,700 VPH. • Clearance Interval: 0.05 ICU • Right-Turn-On-Red Factor: 0.75 for all incorporated city intersections. • Right-Turn-On-Red Factor: 0.00 for all unincorporated intersections. <p>Performance Standard</p> <ul style="list-style-type: none"> • Arterial intersections to achieve LOS D or better (ICU not to exceed .90). <p>LOS ranges for ICU values are as follows:</p> <table> <tr> <th>ICU</th><th>LOS</th></tr> <tr> <td>0.00–0.60</td><td>A</td></tr> <tr> <td>0.61–0.70</td><td>B</td></tr> <tr> <td>0.71–0.80</td><td>C</td></tr> <tr> <td>0.81–0.90</td><td>D</td></tr> <tr> <td>0.91–1.00</td><td>E</td></tr> <tr> <td>Above 1.00</td><td>F</td></tr> </table>		ICU	LOS	0.00–0.60	A	0.61–0.70	B	0.71–0.80	C	0.81–0.90	D	0.91–1.00	E	Above 1.00	F
ICU	LOS														
0.00–0.60	A														
0.61–0.70	B														
0.71–0.80	C														
0.81–0.90	D														
0.91–1.00	E														
Above 1.00	F														
II. PEAK HOUR INTERSECTION VOLUMES – HCM PROCEDURE															
<p>Average vehicle delay calculated using the signalized intersection procedures in the HCM. LOS ranges are as follows:</p> <table> <tr> <th>Delay (in seconds)</th><th>LOS</th></tr> <tr> <td>0–10.00</td><td>A</td></tr> <tr> <td>10.01–20.00</td><td>B</td></tr> <tr> <td>20.01–35.00</td><td>C</td></tr> <tr> <td>35.01–55.00</td><td>D</td></tr> <tr> <td>55.01–80.00</td><td>E</td></tr> <tr> <td>80.01 and up</td><td>F</td></tr> </table>		Delay (in seconds)	LOS	0–10.00	A	10.01–20.00	B	20.01–35.00	C	35.01–55.00	D	55.01–80.00	E	80.01 and up	F
Delay (in seconds)	LOS														
0–10.00	A														
10.01–20.00	B														
20.01–35.00	C														
35.01–55.00	D														
55.01–80.00	E														
80.01 and up	F														
<p>ICU: intersection capacity utilization; VPH: vehicles per hour; LOS: level of service; CMP: Congestion Management Program; HCM: Highway Capacity Manual.</p> <p>Source: Austin Foust Associates, December 2009.</p>															

Table 6
Level of Service Descriptions – Signalized Intersections

LOS	Description	Delay Per Vehicle (secs)
A	LOS A describes operations with low control delay, up to 10 seconds per vehicle. This LOS occurs when progression is extremely favorable and most vehicles arrive during the green phase. Many vehicles do not stop at all. Short cycle lengths may tend to contribute to low delay values.	<10
B	LOS B describes operations with control delay greater than 10 and up to 20 seconds per vehicle. This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than the LOS A, causing higher levels of delay.	10–20
C	LOS C describes operations with control delay greater than 20 and up to 35 seconds per vehicle. These higher delays may result from only fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. Cycle failure occurs when a given green phase does not serve queued vehicles, and overflows occur. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.	20–35
D	LOS D describes operations with control delay greater than 35 and up to 55 seconds per vehicle. At LOS D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, and high V/C ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.	35–55
E	LOS E describes operations with control delay greater than 55 and up to 80 seconds per vehicle. These high delay values generally indicate poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent.	55–80
F	LOS F describes operations with control delay in excess of 80 seconds per vehicle. This level, considered unacceptable to most drivers, often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of lane groups. It may also occur at high V/C ratios with many individual cycle failures. Poor progression and long cycle lengths may also contribute significantly to high delay levels.	>80
Secs: seconds; LOS: level of service; V/C: volume to capacity. Source: Highway Capacity Manual 2000, Transportation Research Board, National Research Council.		

The existing roadway configuration in the study area was previously present in Figure 4 (in Chapter 1) together with existing average daily traffic (ADT) and peak hour volumes. These existing volumes are based on traffic count data collected in 2007 and 2008. Checks were made against selected 2009 data to determine if the 2007/2008 data was adequate for representing 2009 conditions. The results showed that minimal growth in traffic had occurred over that two-year period (in some cases it had decreased) and hence the 2007/2008 information is adequate to represent existing conditions

Table 1, Existing Conditions (2007/2008) Level of Service Summary, presented in Chapter 1, provides the existing peak hour ICU values for the existing study area

intersection together with the LOS designations. It also provides the LOS designations calculated based on the Department's HCM protocol. Based on both these methodologies, the Antonio Parkway/SR-74 intersection LOS does not achieve the desirable LOS D threshold in the AM peak hour.

Pedestrian and Bicycle Facilities

Pedestrian Facilities

The County of Orange standard cross-section for an arterial highway provides for sidewalks to accommodate pedestrians. Currently, there are no sidewalks within the project study area. Sidewalks, lighting, and other improvements are generally constructed when the ultimate improvements are implemented.

In addition to sidewalks for Antonio Parkway and La Pata Avenue, the County of Orange General Plan identifies a riding and hiking trail on the south side of San Juan Creek. The trail is designated on the Master Plan as passing under Antonio Parkway. The trail would be implemented in conjunction with the development of the Ranch Plan.

Bicycle Facilities

As discussed above under Parks and Recreation, the *Orange County General Plan* has designated a Class II bikeway on Antonio Parkway/La Pata Avenue and a Class I regional bike trail on the north side of San Juan Creek. These facilities are not currently constructed within the study area; however, the Class II bikeway is constructed north of the project limits on Antonio Parkway. The Class I bike trail would pass under Antonio Parkway and be constructed in conjunction with the Ranch Plan development.

Environmental Consequences

Traffic and Transportation

Methodology and Assumptions

Traffic forecast data for the analysis was prepared using the South (Orange) County Sub-Area Model (SCSAM). This traffic forecasting model is a focused sub-area model derived from the Orange County Transportation Analysis Model (OCTAM) and was specifically designed to provide detailed forecasting capability within the study area. The SCSAM is based on OCTAM Version 3.2, which was adopted by the Orange County Transportation Authority (OCTA) in July 2005.

The study area is impacted by truck traffic from the Prima Deshecha Landfill. Future trip generation from the landfill is estimated to be 3,910 vehicles per day, of which 41 percent would be trucks. The midday peak hour has the highest proportion of truck traffic, as trucks comprise 52 percent of the total traffic during this time period. The AM and PM peak hours assume 39 and 21 percent of truck traffic occurring during these two time frames, respectively.

The traffic analysis evaluates the No Build Alternative and the Build Alternative conditions for two time frames. The short range (2015) addresses conditions shortly

after project opening, and the long-range (2035) time frame addresses horizon year conditions 20 years later.

The traffic analysis assumes implementation of only those MPAH and RTP improvements that are currently committed for the respective timeframes (i.e., 2015 and 2035). This means that they are currently funded or have a funding program that will generate the necessary funds.

For each of the No Build Alternative versus Build Alternative comparisons, the same set of demand volumes was used. While it is possible that the volumes may differ for a four lane versus a six lane facility, the difference would be slight, particularly for those scenarios that do not include the SR-241 extension. There are no parallel facilities near this section of Antonio Parkway, and hence the demand is largely a function of the geographic location of the project in relation to future demographics in south Orange County. This analysis, therefore, focuses on differences in intersection LOS for Build Alternative versus No Build Alternative conditions. This analysis is focused in the immediate study area because that is the only location where there would be a change in the circulation network.

Year 2015 Traffic Analysis

Figure 6 (presented in Chapter 1) illustrates the 2015 committed highway network in the project vicinity. The intersection lane configuration for the study area is depicted in Figure 21. In the study area's immediate vicinity, the full extension of the future Cow Camp Road and connection to SR-74 is not assumed to be fully built until after 2015. The analysis for the study area has been completed both with and without the La Pata Avenue extension. The MPAH depicts La Pata Avenue extending south and connecting with Avenida La Pata in the City of San Clemente. The environmental compliance documents for this extension have not been completed. The ICU values, average vehicle delay, and LOS for the study intersections under both roadway scenarios are presented in Table 7. For the 2015 timeframe, no deficiencies are identified for either the proposed project or the No Build Alternative.

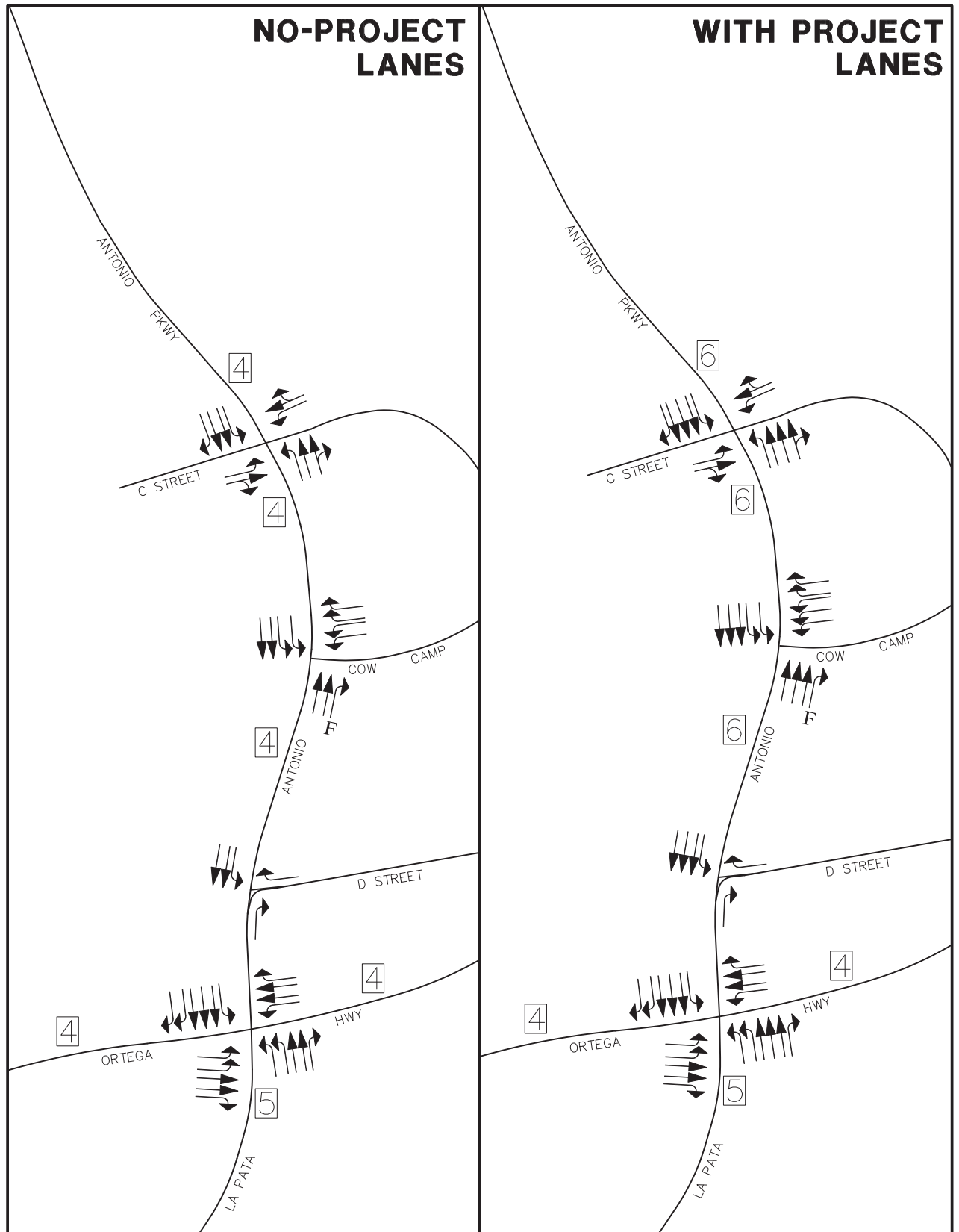
Year 2035 Traffic Analysis

Figure 7 (presented in Chapter 1) illustrates the 2035 committed highway network in the project vicinity. The intersection lane configuration for the study area is the same as the 2015 scenario depicted in Figure 21. By 2035, the future Cow Camp Road is assumed to connect to SR-74. Similarly, the La Pata Avenue extension is assumed to extend south and connect with Avenida La Pata in the City of San Clemente. The analysis has been completed both with and without the extension of SR-241, which is planned to connect with the I-5 freeway in the vicinity of the Orange/San Diego County line. The ICU values, average vehicle delay, and LOS for the study intersections under both roadway scenarios are presented in Table 7. For the 2035 timeframe, there are no projected deficiencies with the proposed project. Under the No Build Alternative, there would be the following deficiencies:

Without the SR-241 Extension

- Antonio Parkway and Cow Camp Road in the AM and PM peak hours.
- Antonio Parkway and SR-74 in the AM and PM peak hours.

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Source: Austin-Foust Associates, Inc.

Intersection Lane Configuration

Figure 21

Antonio Parkway Widening



With the SR-241 Extension

- Antonio Parkway and Cow Camp Road in the PM peak hour.
- Antonio Parkway and C Street in the AM peak hour.

Table 7
Intersection Level of Service Summary (Years 2015 and 2035)
For the No Build and Build Alternative

Intersection	No Build Alternative				Build Alternative			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS
ICUS								
2015, Without La Pata Extension								
Antonio Pkwy and "C" St	0.50	A	0.52	A	0.38	A	0.40	A
Antonio Pkwy and Cow Camp Rd	0.47	A	0.49	A	0.41	A	0.45	A
Antonio Pkwy and SR-74	0.65	B	0.54	A	0.65	B	0.53	A
2015, With La Pata Extension								
Antonio Pkwy and "C" St	0.68	B	0.74	C	0.51	A	0.54	A
Antonio Pkwy and Cow Camp Rd	0.80	C	0.83	D	0.70	B	0.76	C
Antonio Pkwy and SR-74	0.69	B	0.80	C	0.65	B	0.75	C
2035, Without SR-241 Extension								
Antonio Pkwy and "C" St	0.83	D	0.80	C	0.60	A	0.58	A
Antonio Pkwy and Cow Camp Rd	0.94	E	1.06	F	0.73	C	0.82	D
Antonio Pkwy & SR-74	0.98	E	0.99	E	0.90	D	0.87	D
2035, With SR-241 Extension								
Antonio Pkwy and "C" St	0.92	E	0.79	C	0.66	B	0.58	A
Antonio Pkwy and Cow Camp Rd	0.89	D	0.93	E	0.73	C	0.77	C
Antonio Pkwy and SR-74	0.76	C	0.78	C	0.76	C	0.74	C
HCM DELAY								
2015, Without La Pata Extension								
Antonio Pkwy and SR-74	28.9	C	22.4	C	28.9	C	21.8	C
2015, With La Pata Extension								
Antonio Pkwy and SR-74	31.0	C	40.7	D	29.7	C	34.7	C
2035, Without SR-241 Extension								
Antonio Pkwy and SR-74	69.5	E	68.1	E	51.9	D	52.4	D
2035, With SR-241 Extension								
Antonio Pkwy and SR-74	40.0	D	34.1	C	40.0	D	30.9	C

Year 2035 Traffic Analysis

Figure 7 (presented in Chapter 1) illustrates the 2035 committed highway network in the project vicinity. The intersection lane configuration for the study area is the same as the 2015 scenario depicted in Figure 21. By 2035, the future Cow Camp Road is assumed to connect to SR-74. Similarly, the La Pata Avenue extension is assumed to extend south and connect with Avenida La Pata in the City of San Clemente. The analysis has been completed both with and without the extension of SR-241, which is planned to connect with the I-5 freeway in the vicinity of the Orange/San Diego County line. The ICU values, average vehicle delay, and LOS for the study intersections under both roadway scenarios are presented above in Table 7. For the 2035 timeframe, there are no projected deficiencies with the proposed project. Under the No Build Alternative, there would be the following deficiencies:

Without the SR-241 Extension

- Antonio Parkway and Cow Camp Road in the AM and PM peak hours.
- Antonio Parkway and SR-74 in the AM and PM peak hours.

With the SR-241 Extension

- Antonio Parkway and Cow Camp Road in the PM peak hour.
- Antonio Parkway and C Street in the AM peak hour.

Using the HCM average delay methodology, there would be a deficiency in the AM and PM peak hours at the Antonio Parkway and SR-74 intersection without the SR-241 extension.

Pedestrian and Bicycle Facilities

Build Alternative “Proposed Project” (Preferred Alternative)

Pedestrian Facilities

As identified in the project description, not all proposed sidewalks and handicap ramps on Antonio Parkway would meet Americans with Disabilities Act (ADA) requirements. The cross slope through the crosswalks on Antonio Parkway and at its intersections with Cow Camp Road and “C” Street are anticipated to exceed the ADA slope requirements. This deviation is due to the existing profile grade (six percent) along Antonio Parkway. The sidewalk along Antonio Parkway north of San Juan Creek would also follow the roadway grade and would therefore exceed ADA slope requirements.

All proposed sidewalks and handicap ramps on La Pata Avenue would be ADA compliant except the crosswalks across the private street located approximately 600 feet south of SR-74 along the eastern side of La Pata Avenue, which would exceed the ADA standards for crosswalk cross slope due to the existing superelevation (5.4 percent) along La Pata Avenue.

Because the limitations are due to existing conditions, it would not be feasible to modify the slope or superelevations of the existing road to meet the ADA standards. The County of Orange Standard Plan 1115 provides for hillside development, the

grade of arterial highways can be as steep as six percent. The Standard Plan acknowledges that to maintain an 8.33 percent ramp would require a substantial walkway transition length and it would not always be possible for the transition curb or transition walkway to joining the normal height curb or sidewalk. Depressing the walkway would create safety issues such as water ponding behind the curb and a siltation problem on the sidewalk. The Standard Plan cites that a modification to the ADA requirement is allowed per Subpart A, Section 36.302(a) of the ADA and Section 4451(f) of the California Government Code allow modifications to the requirements in order to maintain overall public safety.

The proposed project would provide for the future implementation of the regional riding and hiking trail. The bridge design provides a maintenance road under the bridge. The bench under the bridge for the maintenance road is being designed in a manner that would allow both the maintenance road and the future construction of the trail on the south side of San Juan Creek, consistent with the *Master Plan of Regional Riding and Hiking Trails*.

Bicycle Facilities

No modifications to the existing Class II Bike Trail on Antonio Parkway north of the project site are required by the proposed project. Since no modifications to the existing facility are required, construction would occur south of the existing bikeway. Short-term impacts to the existing bikeway are not anticipated. Though it is not an official bikeway, bicyclists that choose to ride on the roadway would experience the construction zone as they leave the existing bikeway. The Traffic Management Plan would identify signage and other measures to minimize conflicts associated with construction activities.

The Class II Bike Trail designated on the *Orange County General Plan* has been provided for in the standard cross-section and would be constructed as part of the proposed improvements. Within the Caltrans right-of-way at the Antonio Parkway/La Pata Avenue intersection with SR-74, the bike lane/shoulder widths match the shoulder widths designated by the Department. The construction of the proposed improvements would have a beneficial effect on the existing Class II bike trail on Antonio Parkway north of the project limits because it would provide for a continuation of the trail, thereby enhancing the recreational opportunities.

The bridge design also accommodates the proposed Class I (off-road) bike trail parallel to and on the north side of San Juan Creek. Preliminary concepts are that, under the bridge, the bike trail would be accommodated on the Santa Margarita Water District's maintenance road on the north side of San Juan Creek, consistent with the *Master Plan of Bikeways*. The trail would be constructed in conjunction with the adjacent land use.

No Build (No Action) Alternative

Pedestrian Facilities

With the No Build Alternative, sidewalks would not be implemented. As the surrounding area develops, more pedestrians will be in the study area. The No Build Alternative does not make provisions to safely accommodate these pedestrians.

The No Build Alternative would not provide for the maintenance road under the bridge, which is also being designed to accommodate the future riding and hiking trail. However, the No Build Alternative does not preclude the implementation of the trail. It would just defer the construction of the pathway under the bridge until the trail is constructed.

Bicycle Facilities

The No Build Alternative would not provide for the extension of the Class II bikeway on Antonio Parkway. The existing bikeway ends at the southern end of the Ladera Ranch Planned Community. This alternative would leave a gap in the planned bikeway network, as depicted in the *Orange County General Plan*.

Similar to the proposed project, the No Build Alternative would not preclude the future implementation of the Class I (off-road) bike trail parallel to San Juan Creek. Preliminary concepts are that, under the bridge, the bike trail would be accommodated on the Santa Margarita Water District's maintenance road. The trail would be constructed in conjunction with the adjacent land use.

Avoidance, Minimization, and/or Mitigation Measures

The following is a standard provision that would be applicable to all projects requiring detouring or traffic redirection.

- T-1 During the Final Design Phase, a Traffic Management Plan shall be developed to reduce potential delays and conflicts associated with construction activities. The Traffic Management Plan shall be approved by the Manager of Planned Communities/Public Works. The plan shall identify construction phasing and the associated Detour Plan and Signage Program to alert the public of ongoing construction activities.

Visual/Aesthetics

Regulatory Setting

The National Environmental Policy Act of 1969, as amended (NEPA), establishes that the federal government use all practicable means to ensure all Americans safe, healthful, productive, and *aesthetically* (emphasis added) and culturally pleasing surroundings ([42 U.S.C. 4331[b][2]]). To further emphasize this point, the Department, as assigned by FHWA, in its implementation of NEPA (23 U.S.C. 109[h]) directs that final decisions regarding projects are to be made in the best overall public interest taking into account adverse environmental impacts, including among others, the destruction or disruption of aesthetic values.

Affected Environment

The information in this section is based on a Visual Impact Assessment Memorandum (August 2009) including a Visual Assessment Checklist (2009).

Visual impacts are relative to the visual environment in which they occur. Visual impacts can extend beyond the physical areas that result in disturbance. The regional landscape establishes the general visual environment. Specific impacts are determined by defining the visual quality of the landscape units and the project

viewshed. Visual quality and the viewshed are interrelated elements that occupy the same three-dimensional space, each space affecting the adjacent space.

Identification of the viewers and the aspects of the visual environment to which they are likely to respond are necessary to understand and predict viewer response to proposed projects. The response to the visual environment determines the viewer exposure and is based on the different activities of the viewer groups, their sensitivity to the visual elements, and the duration of their view.

Viewer groups in the Antonio Parkway Widening project area include residents of Covenant Hills (the southernmost development in Ladera Ranch); users of the Rancho Mission Viejo Riding Park at San Juan Capistrano; and motorists on Antonio Parkway or the portion of SR-74 in the project's immediate vicinity. Overall the viewshed quality is high because the surrounding area is in a natural state. However, in the immediate vicinity of the Antonio Parkway/SR-74 intersection, the viewshed quality is moderate. The long-range views are still of natural hillsides but short-range views have been disturbed both from the recent construction activities on SR-74 and from past agricultural activities. The northwestern and southeastern quadrants of this intersection were previously leased by commercial nurseries. The leases expired and were not renewed. Therefore, the area is highly disturbed with only scrubby weeds on site. Pads for the container plants have also been graded. This is visible on the aerial base map in Figure 12.

Antonio Parkway has been constructed to full standard to the southern boundary of the Ladera Ranch Planned Community. Antonio Parkway is a four-lane roadway from the Ladera Ranch Planned Community's southern boundary to SR-74. The bridge across San Juan Creek was built as part of the initial phase of improvements associated with the Ladera Ranch Planned Community and is 68 feet wide. No lighting or sidewalks have been provided south of the Ladera Ranch Planned Community, as these would be planned to be implemented as part of project improvements. Though only interim improvements were constructed, the ultimate right-of-way was graded from the southern boundary of Ladera Ranch to the San Juan Creek Bridge with the initial phase of construction in 1998. In 2007, the vegetation in this area, including the area beneath the bridge, was mowed. As a result, the vegetation on site is limited to regrowth.

Project limits begin at approximately 2,000 feet south of the intersection at Covenant Hills Drive (the southern boundary of the Ladera Ranch Planned Community). The most southern row of homes in Covenant Hills would have direct views of the project site. Though the roadway is clearly visible from the first row of homes, it is not a primary resource in the viewshed. These homes are set on a hill. Due to elevation differences of homes with the surrounding area, the homes have expansive views of the nearby hills. The visual quality from this location would be high and the visual sensitivity would also be high because views would be an important asset for these homes. Views from this development are depicted in Figure 22.

The orientation of the Rancho Mission Viejo Riding Park at San Juan Capistrano is inward toward the polo/exhibition fields. There are locations within the Riding Park with views northward toward Antonio Parkway. There is an approximate 300-foot elevation rise from the polo/exhibition fields to the northern limits of the proposed project. The overall visual quality from the Riding Park is moderately high. The long-range vistas are of natural hillsides. The short range views are of SR-74 to the north.

Both Antonio Parkway and SR-74 are designated on the County of Orange *Scenic Highway Plan* as Landscape Corridors. North of the project site, Antonio Parkway has been developed consistent with the County's Scenic Highway Implementation Planning Guidelines. However, for the project-segment of Antonio Parkway, landscape features have not been incorporated because only interim improvements have been implemented. Though eligible, SR-74 has not been designated as a State Scenic Highway.

Environmental Consequences

Build Alternative "Proposed Project" (Preferred Alternative)

Modification to Visual Character

The proposed project would not introduce any major new visual elements into the project area; rather it would widen the existing roadway. The initial phase of the project was constructed in 1998. This involved the construction of the existing four-lane roadway and the grading for the ultimate facility south to the bridge over San Juan Creek. The project would result in an incremental increase in the paved area and bridge width within the project area. No major landform alteration would be required. As a result, the project would not constitute a substantial change to the visual character of the area.

The design of the new bridge over San Juan Creek would complement the existing bridge. This would not substantially change the existing mid-range or long-range viewshed from the homes in Covenant Hills. The closest residential unit is more than 600 feet away from the closest edge of Antonio Parkway. There is a minimum elevation difference of 90 feet from the highest point on the roadway to the lowest residential unit. The maximum elevation difference is 415 feet from the lowest point of the roadway to the lowest residential unit. Once completed, the new bridge would visual appear as a widening of the existing bridge rather than a separate structure.

The project would include design elements already present as part of the existing roadways. As previously indicated, the preliminary grading for the Antonio Parkway widening was completed previously south to the San Juan Creek Bridge, as part of the initial phase of the roadway construction. As such, the proposed project would result in a modest level of change in the physical characteristics due to landform alteration. There would be a retaining wall constructed along the western side of La Pata Avenue, adjacent to the Rancho Mission Viejo Riding Park at San Juan Capistrano. The wall would be visible for approximately 140 linear feet. The retaining wall would be visually consistent with the existing retaining wall at the base of the slope (within the park). However, it would not be as prominent because the exposed face of the existing wall is approximately eight to ten feet tall, whereas only four to five feet of the proposed wall would be visible.

As discussed previously, the ultimate grading for most of the roadway was conducted as part of the initial phase of the project in 1998. Therefore, limited grading would be required.

There currently is no landscaping (median or on the parkway) that would be removed during construction. With the development to ultimate configuration, the project would incorporate the required design and landscape features in compliance with the



A. View from Covenant Hills looking southeasterly toward San Juan Creek.



B. View from Covenant Hills looking toward ultimate grading line.

Views from the Covenant Hills Development

Figure 22

Antonio Parkway Widening



Orange County *Scenic Highway Plan*. This would allow Antonio Parkway to further complement the visual character of the adjacent community.

Some vegetation in San Juan Creek would be displaced for construction of the columns for the bridge improvements. The regulatory permits issued for this project by the Army Corps of Engineers, US Fish and Wildlife Service, California Department of Fish and Game, and the Regional Water Quality Control Board require that the area be revegetated with native plant material upon completion of construction; therefore, the loss of vegetation would be for a short duration. Based on the permit performance standards, the loss would be for less than five years.

Viewer Groups

The most sensitive viewer group would be the southernmost row of residential units in Ladera Ranch's Covenant Hills development. Views from the residential lots would not undergo a substantial change. Mid-range views would experience a minor modification as Antonio Parkway would be widened. The project would not result in substantial landform modification. The amount of hard surface (i.e., pavement) would increase. The location of the previous grading is visible from these homes (see Figure 22, Photograph A). This area would be paved. However, this area does not have landscaping or other enhancements currently. With the completion of the Antonio Parkway project, landscaping would be implemented consistent with the County of Orange Landscape Corridor requirements. This would minimize the visual effect of the roadway widening. In addition, the focus of the residents' viewshed would continue to be on the long-range views of the natural hillsides.

A portion of the homes would have direct views of the bridge over San Juan Creek (see Figure 22, Photograph B). These residents would have views of the loss of vegetation under the bridge. However, this would be a small percentage of the creek area and would be for a short duration. Given the water in the creek, the vegetation would be restored relatively quickly. As previously mentioned, the area was mowed in 2007 and regrowth is visible in Figure 22, Photograph B, which were taken in summer 2009.

The second set of viewer groups are the users of the Rancho Mission Viejo Riding Park at San Juan Capistrano. Views from the Riding Park would see a wider roadway extending up the hill, which is consistent with the roadway cross-section at the top of the hill. The introduction of landscaping consistent with the Orange County Landscape Corridor requirements would minimize the impacts associated with the wider roadway cross-section. Long-range views from the Riding Park would not be modified. The widening of Antonio Parkway would not modify the overall visual character of the park or the setting. Additionally, given the uses at the park, the view orientation would be internal to the park.

The third viewer group is the motorist. By nature, the duration of their exposure to the viewshed is short. Since this group is transient, the sensitivity to change in the viewshed is usually low to moderate. The project would not introduce new elements that would substantially change the viewshed. The project would result in more hardscape associated with the increased amount of paving and wider bridge structure. This would be softened with the introduction of landscaping. However, the most notable portion of the viewshed would continue to be the long-range views. This is especially applicable to drivers traveling south of Antonio Parkway where the

elevation allows scenic vistas of the hillsides. The roadway widening would not alter these views.

No Build (No Action) Alternative

The No Build Alternative would not impact visual resources. The views from and of the project area would remain the same.

Avoidance, Minimization, and/or Mitigation Measures

Designing the new bridge to be consistent with the existing bridge will minimize the visual effect of the project by providing uniformity in design. Once completed, viewers would perceive the existing and new bridges to be a single structure. As a standard condition, landscaping, consistent with the County of Orange Landscape Corridor requirements, would ensure the roadway treatment is consistent with the segment of Antonio Parkway north of the project limits.

VR-1 As part of final design, landscape plans consistent with the Landscape Corridor requirements of the County of Orange Scenic Highway Component shall be prepared. Landscaping shall be installed subsequent to project construction.

Cultural Resources

Regulatory Setting

“Cultural resources”, as used in this document, refers to all historical and archaeological resources, regardless of significance. Laws and regulations dealing with cultural resources include the National Historic Preservation Act of 1966, as amended, (NHPA), which sets forth national policy and procedures regarding historic properties, defined as districts, sites, buildings, structures, and objects included in or eligible for the National Register of Historic Places. Section 106 of NHPA requires federal agencies to take into account the effects of their undertakings on such properties and to allow the Advisory Council on Historic Preservation the opportunity to comment on those undertakings, following regulations issued by the Advisory Council on Historic Preservation (36 CFR 800). On January 1, 2004, a Section 106 Programmatic Agreement (PA) between the Advisory Council, FHWA, State Historic Preservation Officer (SHPO), and the Department went into effect for Department projects, both State and local, with FHWA involvement. The PA implements the Advisory Council’s regulations, 36 CFR 800, streamlining the Section 106 process and delegating certain responsibilities to the Department. The FHWA’s responsibilities under the PA have been assigned to Caltrans as part of the Surface Transportation Project Delivery Pilot Program (23 CFR 773), effective July 1, 2007.

Historic properties may also be covered under Section 4(f) of the U.S. Department of Transportation Act, which regulates the “use” of land from historic properties. See Appendix A for specific information regarding Section 4(f).

Affected Environment

Cultural resources studies completed for the proposed project include a Historic Property Survey Report, HPSR (2010) and Archaeological Survey Report, ASR (2010).

The Area of Potential Effects (APE) for the project was established in consultation with Jim Kaufman, District Local Assistance Engineer, and Charles Baker, Lead Archeological Surveyor, in December 2009.

The APE was established as all areas to be affected by construction grading (including remedial grading), bridge construction (including abutments and piers), temporary construction easements, staging areas and associated ancillary facilities such as drainage outfalls and water quality treatment facilities. This concept was accepted by the Department and the APE was signed by the Professionally Qualified Staff person on April 1, 2010.

Preparation of the HPSR included consultation with various agencies and parties regarding knowledge of cultural resources within the APE. Consultation included communication with the Native American Heritage Commission (NAHC). A faxed letter was sent to Dave Singleton on November 16, 2009. A list of contacts was returned by the NAHC on November 23, 2009 and did not indicate the presence of Native American Resources in the project vicinity. Each individual was contacted by e-mail or mail and called by phone. Five individuals responded and indicated that there was a general sensitivity within the project vicinity for Native American resources, but did not provide information on the location of specific resources.

Other parties consulted include the San Juan Capistrano Historical Society/Historical Preservation Group. A phone conversation with Don Tryon (Historian) on November 17, 2009, provided information on naming of Antonio Parkway. No other project area information was obtained. A records search was conducted with the South Central Coastal Information Center (SCCIC) at California State University, Fullerton, on November 16, 2009.

The records search revealed that three prehistoric sites (CA-ORA-26, CA-ORA-881, and CA-ORA-902) have been recorded within and adjacent to the APE, while six additional prehistoric sites (CA-ORA-27, CA-ORA-880, CA-ORA-882, CA-ORA-1042, CA-ORA-1043, and CA-ORA-1346), and one historic site (33-176631) were recorded within a ½-mile radius of the APE. Accordingly, it has been determined that cultural resources are present adjacent to the APE. The Antonio Parkway Bridge, No. 55 0697, is listed as Category 5 (National Register ineligible) in the Caltrans Historic Bridge Inventory and is present within the APE.

The entire project area was surveyed in 1994 as part of the Antonio Parkway alignment study and again in 2000 as part of the Ranch Plan for Rancho Mission Viejo. A reconnaissance survey was conducted on November 18, 2009 and February 1, 2010 to search for previously unrecorded cultural resources and to field check the three recorded archaeological sites that are located within and adjacent to the APE. Much of the APE is either paved or previously disturbed from construction of Antonio Parkway.

A discussion of the three recorded sites within or adjacent to the APE is provided below.

- CA-ORA-26 was recorded by Romero in 1935. ARI (Schuster 1977) updated the site record to indicate that the site was heavily disturbed and to report additional artifacts south of SR-74 (Ortega Highway). ARMC further updated the site record in 1980 and delineated three loci: Locus A – main site area; Locus B – small knoll located due east of main area; and Locus C – small

possible quarrying area located on the upper knoll southeast of site. Subsequent investigations by the Department personnel (Romani et al. 1986), ARMC personnel (Demcak and Velechovsky 1996), and Greenwood and Associates (Toren 1997) confirmed that the site had been heavily impacted by nursery operations and highway construction. The project archaeologists from the Department, ARMC, and Greenwood and Associates concurred in their finding that the site lacked research potential and integrity and therefore would not qualify for the National Register of Historic Places (NRHP). More recently, ARMC crew members monitored Locus A during the SR-74 widening project and recovered debitage, flake and core tools, and ground stone items from a shallow, disturbed deposit. No directly datable materials, such as shell, bone or charcoal, were recovered (Demcak, n.d., report in progress). The current survey team observed extensive disturbance throughout the recorded site area and noted a scatter of 29 flaked and ground stone items confined to the extreme southwestern portion of the site. The SHPO determined this site was not eligible for the NRHP on August 12, 1987. However, subsequent to that determination an additional locus of the site was located. As part of this environmental process, the Department consulted with the SHPO regarding the eligibility of the site in light of the additional locus. Based on testing done at the site, the SHPO concurred with the Department's determination that the site is not eligible for the NRHP because it lacks subsurface deposits. The letter from the SHPO, dated April 19, 2010, is provided in Chapter 3, Comments and Coordination.

- CA-ORA-902 was recorded by ARMC in 1980 as a small lithic scatter consisting of chipped stone and ground stone tools with a possible midden. Testing in connection with the Antonio Parkway alignment (Demcak and Velechovsky 1996) produced only debitage, waste flakes and cores, and no subsurface deposit. The current field survey revealed a single flake tool at the site location. The site was determined to lack research potential and thus would not be NRHP eligible. The SHPO concurred with this determination on April 19, 2010.
- CA-ORA-881 was recorded by ARMC in 1980 as an extensive scatter of milling stone assemblage artifacts (manos, metates, chipping waste). A subsequent test by ARMC (Demcak and Velechovsky 1996) for the Antonio Parkway alignment study uncovered chipped and ground stone artifacts, no subsurface deposit, and no directly datable materials, such as shell, bone or charcoal. Lacking research potential, the site was considered to be NRHP ineligible. The site has subsequently been heavily impacted by the construction of the first phase of Antonio Parkway, leaving only a site remnant adjacent to the APE. Thus the site lacks integrity as well. An earlier field check (Demcak 2000a) produced one biface fragment, but no artifacts were observed during the current survey. In conjunction with the Department's consultation, the SHPO concurred with the determination that the site lacked integrity and did not offer research potential due to the lack of subsurface deposits, and therefore, was not eligible for the NRHP.

Environmental Consequences

Build Alternative “Proposed Project” (Preferred Alternative)

As discussed previously, three prehistoric sites (CA-ORA-881, CA-ORA-26, and CA-ORA-902) were recorded within and adjacent to the APE. Based on previous subsurface test investigations, it has been determined that these sites are not eligible for the NRHP. These sites have been disturbed from agricultural activities and the construction of the initial phase of Antonio Parkway.

In addition to the sites noted above, six additional prehistoric sites (CA-ORA-27, CA-ORA-880, CA-ORA-882, CA-ORA-1042, CA-ORA-1043, and CA-ORA-1346) and one historic site (33-176631) were recorded within a ½-mile radius of the APE. However, these sites would not be impacted by the proposed project. Therefore, no effects to known archaeological or historical properties are anticipated. Consequently, there would be no “use” of Section 4(f) historic resource.

No Build (No Action) Alternative

The No Build Alternative would result in no impacts to cultural resources.

Avoidance, Minimization, and/or Mitigation Measures

No historic properties will be affected as a result of this project. No avoidance, minimization or mitigation measures are necessary beyond the following regular requirements.

CUL-1 If cultural materials are discovered during construction, all earth-moving activities within and around the immediate discovery area will be diverted until a qualified Archaeologist can assess the nature and significance of the find.

CUL-2 If human remains are discovered, *California Health and Safety Code*, Section 7050.5 states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains, and the County Coroner must be contacted, pursuant to Section 5097.98 of the *California Public Resources Code* (PRC). If the remains are thought to be Native American, the Coroner will notify the NAHC, who will then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains would contact the County of Orange Project Engineer so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

PHYSICAL ENVIRONMENT

Hydrology and Floodplain

Regulatory Setting

Executive Order 11988 (Floodplain Management) directs all federal agencies to refrain from conducting, supporting, or allowing actions in floodplains unless it is the only practicable alternative. Requirements for compliance are outlined in 23 CFR 650 Subpart A. In order to comply, the following must be analyzed:

- The practicability of alternatives to any longitudinal encroachments
- Risks of the action
- Impacts on natural and beneficial floodplain values
- Support of incompatible floodplain development
- Measures to minimize floodplain impacts and to preserve/restore any beneficial floodplain values impacted by the project.

The base floodplain is defined as “the area subject to flooding by the flood or tide having a one percent chance of being exceeded in any given year.” An encroachment is defined as “an action within the limits of the base floodplain.”

Affected Environment

The information contained in this section is based on the analysis provided in the report titled, *Location Hydraulic Study-Antonio Parkway Bridge Stream Bank Revetment-San Juan Creek*, (May 2010).

The San Juan Creek watershed is located mainly in southern Orange County, California. The watershed encompasses a drainage area of approximately 176 square miles, with the northeastern portion of the watershed extending into Riverside County. The headwaters of San Juan Creek generate from the Cleveland National Forest in the Santa Ana Mountains and the creek drains southwesterly to the Pacific Ocean at Doheny State Beach, near Dana Point Harbor.

The flow rate assumptions used in the *Location Hydraulic Study-Antonio Parkway Bridge Stream Bank Revetment-San Juan Creek* are consistent with a Regional Watershed Hydrology Study prepared by PACE in 2008 in conjunction with the Orange County Flood Control District (OCFCD). The hydrology study estimates unmitigated flow rates for the ultimate condition at specific nodes for seven storm events. The flow rates used in the hydraulic analysis are presented in Table 8 below.

Table 8
Flow Rates Used in Hydraulic Model

Recurrence Interval	Flow Rate Q (cfs)
100-year Expected Value	30,614
100-year High Confidence	41,382
500-year Expected Value	56,000
Source: PACE Engineering, May 2010.	

The flow rates for the 100-year recurrence intervals shown in Table 8 were obtained from the Regional Watershed Hydrology Study prepared by PACE. The 500-year flow was obtained from the Federal Emergency Management Agency (FEMA) Flood Insurance Study (FIS). The effective limits of flooding are shown on FEMA Flood Insurance Rate Map (FIRM) numbers 06059C0465J and 06059C0444J.

Based on the FIRM Panels, a regulatory floodway has not been established for San Juan Creek in the area of the Antonio Parkway Bridge. It should be noted that the

Antonio Parkway bridge deck is situated approximately 45-feet above the existing streambed, well above the highest calculated water surface elevation.

Mapping of the current 100-year floodplain, as designated by FEMA is depicted in Figure 23. The 100-year floodplain is defined as "...the area subject to flooding by the flood or tide having a one percent chance of being exceeded in any given year."

Environmental Consequences

Build Alternative "Proposed Project" (Preferred Alternative)

Hydraulic Evaluation

A detailed hydraulic analysis was performed in order to determine the impacts to the existing floodplain due to the proposed improvements to the stream bank. The limits of the hydraulic model extend approximately 2,000 feet downstream to approximately 1,000 feet upstream of Antonio Parkway Bridge, for a study reach of approximately 3,000 feet. Although the project reach is roughly 300-feet in length, the hydraulic model extends upstream and downstream of the project limits to minimize any boundary condition influences.

Detailed water surface profile models were developed to analyze the hydraulics representative of the "baseline" floodplain for the natural river system. These hydraulic models are very useful in assessing the changes that would occur within the floodplain with implementation of the proposed project; they also allow the impacts to be quantified. Based on the results of the hydraulic analysis, there are no potential impacts to any residences, buildings, or crops. No flood damages are anticipated for any roadways or surrounding properties due to the proposed bridge widening.

Floodplain Encroachment

The Department defines an encroachment as "an action within the limits of the 100-year floodplain". "Significant encroachment", as defined in Title 23 of the *Code of Federal Regulations* (CFR) §650.105, is a highway encroachment and any direct support of likely base floodplain development that would involve one or more of the following construction- or flood-related impacts:

- A significant potential for interruption or termination of a transportation facility that is needed for emergency vehicles or that provides a community's only evacuation route;
- A significant risk (to life or property); and/or
- A significant adverse impact on natural and beneficial floodplain values.

The additional bridge piers required for the widened bridge deck and soil cement revetment would be constructed within the San Juan Creek floodplain. The project is expected to change the water surface elevation from between -0.01 and 0.06 feet. This is a negligible change in the surface elevation and, based on the criteria above, would not be considered a "significant encroachment". The additional piers would be constructed inline with the existing bridge piers so the impacts would be minimized. The soil cement revetment would not cause any floodplain encroachments because it would be constructed within the limits of the existing channel bank.

The project would not result in the interruption or termination of transportation facilities. In fact, operation of the proposed project would improve access for emergency vehicles for emergency purposes. Additionally, the encroachment would not result in incompatible floodplain development because the proposed project is a transportation improvement project and would not construct housing or other development within the floodplain. As a result, there would not be a substantial risk to life or property.

Figure 23 provides the limits of the 100-year flood plain for the existing and proposed conditions (i.e., with the widening of the Antonio Parkway Bridge), based on the 100-year Expected Value flow.

No Build (No Action) Alternative

The No Build Alternative would not result in floodplain encroachment, nor would it increase the water surface elevation of San Juan Creek.

Avoidance, Minimization, and/or Mitigation Measures

Project design provides that the additional bridge piers would be constructed inline with the existing bridge piers. This would minimize impacts to the floodplain. No additional mitigation measures are required.

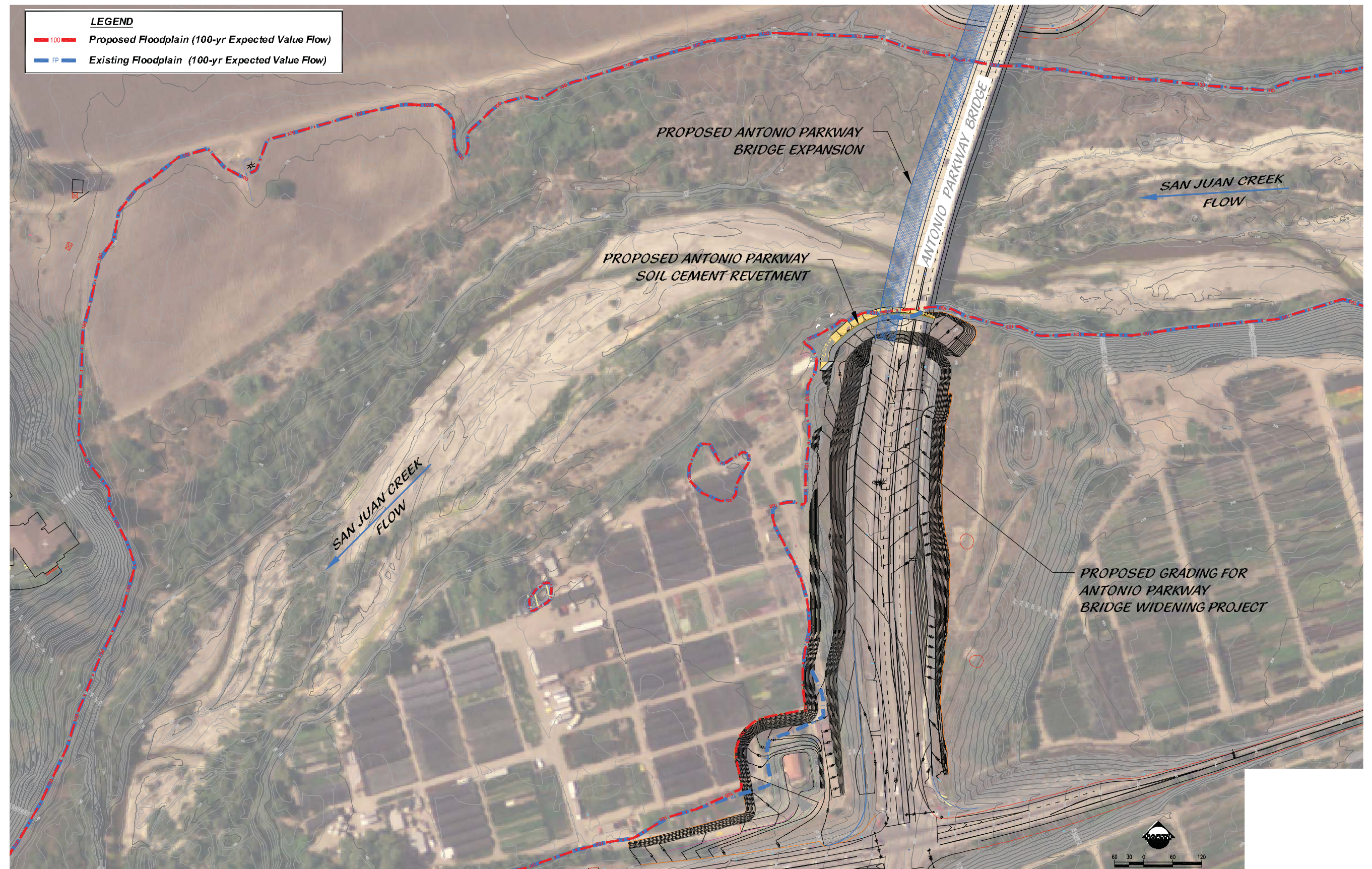
Water Quality and Storm Water Runoff

Regulatory Setting

Section 401 of the Clean Water Act requires water quality certification from the State Water Resource Control Board (SWRCB) or a Regional Water Quality Control Board (RWQCB) when the project requires a Federal permit. Typically this means a Clean Water Act Section 404 permit to discharge dredge or fill into a water of the United States, or a permit from the Coast Guard to construct a bridge or causeway over a navigable water of the United States under the Rivers and Harbors Act.

Along with Clean Water Act Section 401, Section 402 establishes the National Pollutant Discharge Elimination System (NPDES) for the discharge of any pollutant into waters of the United States. The federal Environmental Protection Agency has delegated administration of the NPDES program to the SWRCB and the nine RWQCBs. To ensure compliance with Section 402, the SWRCB has developed and issued the Department an NPDES Statewide Storm Water Permit to regulate storm water and non-storm water discharges from Department's right-of-way, properties and facilities. This same permit also allows storm water and non-storm water discharges into waters of the State pursuant to the Porter-Cologne Water Quality Act.

Storm water discharges from the Department's construction activities disturbing one acre or more of soil are permitted under the Department's Statewide Storm Water NPDES permit. These discharges must also comply with the substantive provisions of the SWRCB's Statewide General Construction Permit. Non-Departmental construction projects (encroachments) are permitted and regulated by the SWRCB's Statewide General Construction Permit. All construction projects exceeding one acre or more of disturbed soil require a Storm Water Pollution Prevention Plan (SWPPP) to be prepared and implemented during construction. The SWPPP, which



100-Year Floodplain

Antonio Parkway Widening

Figure 23

identifies construction activities that may cause discharges of pollutants or waste into waters of the United States or waters of the State, as well as measures to control these pollutants, is prepared by the construction contractor and is subject to Department review and approval.

Finally, the SWRCB and the RWQCBs have jurisdiction to enforce the Porter-Cologne Act to protect groundwater quality. Groundwater is not regulated by Federal law, but is regulated under the state's Porter-Cologne Act. Some projects may involve placement or replacement of on-site wastewater treatment systems (OWTS) such as leach fields or septic systems or propose implementation of infiltration or detention treatment systems which may pose a threat to groundwater quality. Currently the OWTS program is without SWRCB regulation but threats to groundwater quality on the project site should be evaluated and addressed accordingly in the environmental document. Design standards for installation and operation of infiltration and detention treatment systems to protect groundwater quality are provided in the Department's NPDES Permit and guidance and those protections should also be addressed in the environmental document.

Affected Environment

The information provided in this section is obtained from the previous CEQA documents, which evaluated the impacts associated with the widening of Antonio Parkway, and the Antonio Parkway Widening Project Water Quality Assessment Report (February 2010). Previous CEQA documents include Final Environmental Impact Report (FEIR) 589 prepared for The Ranch Plan and FEIR 584 prepared for the Southern Subregional NCCP/MSAA/HCP. In conjunction with FEIR 589, a Water Quality Management Plan for the Rancho Mission Viejo development was prepared by Geosyntec Consultants, Inc. (June 2004). In addition, information from a memorandum entitled Best Management Practices Concept Plan for Antonio Parkway/La Pata Avenues, prepared by Geosyntec Consultants, Inc. (April 2008) was utilized in this analysis.

Antonio Parkway is located within the San Juan Creek watershed. As previously indicated, the watershed encompasses a drainage area of approximately 176 square miles with the headwaters in the Santa Ana Mountains, and it drains southwesterly to the Pacific Ocean at Doheny State Beach, near Dana Point Harbor.

Beneficial Uses

San Juan Creek is the receiving water for this Project and is therefore potentially the affected water resource for the Project. In compliance with Section 303 of the Clean Water Act (CWA) and the Porter-Cologne Water Quality Control Act, the San Diego Region Regional Water Quality Control Board's *Basin Plan* (1997) lists the beneficial uses of the water bodies located within the proposed project area. These are shown in Table 9, below. Definitions for the beneficial uses shown in Table 9 are shown in Table 10.

Table 9
Beneficial Uses of Water Bodies Within the Project Vicinity

Beneficial Use	San Juan Creek
AGR	P
IND	P
REC1	P
REC2	P
WARM	P
COLD	P
WILD	P
E = Expected Beneficial Use P = Present or Potential Beneficial Use Source: San Diego Basin Plan, Regional Water Quality Control Board, 1997.	

Table 10
Definition of Beneficial Use Categories

Abbreviation	Name	Definition
AGR	Agricultural Supply	Includes uses of water for farming, horticulture, or ranching.
IND	Industrial Service Supply	Includes uses of water for industrial activities that depend primarily on water quality.
REC1	Contact Water Recreation	Includes uses of water for recreational activities involving body contact with water, where ingestion of water is reasonably possible.
REC2	Non-Contact Water Recreation	Includes the uses of water for recreational activities involving proximity to water, but not normally involving body contact with water.
WARM	Warm Freshwater Habitat	Includes uses of water that supply warm water ecosystems.
COLD	Cold Freshwater Habitat	Includes uses of water that supply cold water ecosystems.
WILD	Wildlife Habitat	Includes uses of water that support terrestrial ecosystems.
Source: San Diego Basin Plan, Regional Water Quality Control Board, 1997.		

Pollutants of Concern and Best Management Practices

The lower portion of San Juan Creek and the Pacific Ocean at the mouth of the creek are listed on the Section 303(d) listing of impaired water bodies due to high concentrations of indicator bacteria. The presence of certain types of bacteria in surface water is used as an indicator of human pathogens. Pathogens can cause illness in recreational water users and people who harvest and eat contaminated shellfish. Indicator bacteria have been historically used as indirect evidence of human pathogens because they are easier and less costly to measure than the pathogens themselves. A revised TMDL for indicator bacteria has been developed

by the San Diego RWQCB to address bacteria impaired beaches and creeks in 13 watersheds in the San Diego Region, including the San Juan Creek.

The lower portion of San Juan Creek was also listed for a legacy pesticide (DDE is a break down product of DDT) in the 2006 303(d) List. The updated 2008 303(d) list, The Clean Water Act Sections 303(d) and 305(b) Integrated Report for the San Diego Region, was approved by the San Diego Regional board on December 16, 2009. The Integrated Report, including the updated 303(d) list, was submitted to the State Water Resources Control Board (State Board) for approval along with the other Region's reports, and is awaiting approval. The 2008 303(d) list suggests adding listings for Diazinon, Phosphorus, Selenium, Total Nitrogen as N, and Toxicity for San Juan Creek.

The National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements (Order No. R9-2002-0001) issued by the San Diego Regional Water Quality Control Board (RWQCB) regulate discharges of urban runoff from municipal separate storm sewer systems (MS4s) in the portion of Orange County within the San Diego RWQCB's jurisdiction. The MS4 permit stipulates requirements for new development and significant redevelopment, including specific selection and sizing criteria for treatment control BMPs.

To implement the requirements of the NPDES permit, the co-permittees developed a 2003 Drainage Area Management Plan (DAMP) that includes a New Development and Significant Redevelopment Program (OCRDM 2003). This program provides a framework and a process for following the NPDES permit requirements and incorporates watershed protection/storm water quality management principles into the Co-permittees' General Plan process, environmental review process, and development permit approval process. The County of Orange and the Orange County Flood Control District adopted a DAMP Local Implementation Plan (2003 DAMP, Appendix A) in July 2003. The County's Local Implementation Plan contains the requirements for all new development and significant redevelopment projects that would apply to the Antonio Parkway/La Pata Avenue Road project.

Environmental Consequences

Build Alternative "Proposed Project" (Preferred Alternative)

Beneficial Uses

Construction of the proposed project could result in reduced water quality due to increased erosion and siltation. This would result from construction activities and not from alteration of the course of the creek. Nevertheless, the increase in erosion and siltation could affect freshwater habitat and wildlife habitat beneficial uses. However, water quality impacts affecting beneficial uses would be avoided by incorporating BMPs during the construction and operational phases of the project. These BMPs are discussed below. As a result of implementing these BMPs, impacts to beneficial uses are not expected to be substantial.

Pollutants of Concern and Best Management Practices

Priority projects within Orange County are required to reduce pollutants of concern in storm water discharges to the maximum extent practicable through the incorporation and implementation of site design, source control, and treatment control BMPs. To

meet this requirement, projects must incorporate a storm water treatment control BMP or a combination of BMPs that will address the pollutants of concern. Primary pollutants of concern are anticipated, or potential, pollutants in project runoff, based on proposed land uses, which have also been identified as causing impairment of receiving waters on the most recently approved 303(d) list which occurred in 2006. Other pollutants of concern are anticipated or potential pollutants that have not been identified as causing impairment of receiving waters.

Pathogens (bacteria indicators) and the legacy pesticide DDE (Dichlorodiphenyl-dichloroethylene) have been identified on the 2006 303(d) list as impairing the beneficial uses in Lower San Juan Creek. Indicator bacteria are not expected to be generated by roadway projects, nor is DDE which is a breakdown product of DDT which was phased out for usage as an approved pesticide in 1972. Therefore, there are no primary pollutants of concern for the project.

Runoff quality from highways is highly variable depending on various factors including climatic conditions, annual average daily traffic (AADT), roadway and shoulder material and conditions, surrounding land use, and other factors. The pollutants of concern identified for roadway projects by the County of Orange Local Implementation Plan are:

- Heavy metals;
- Nutrients;
- Pesticides;
- Organic compounds, including petroleum hydrocarbons and oil and grease;
- Sediment;
- Trash and debris;
- Oxygen-demanding substances (pesticides and petroleum hydrocarbons).

Indicator bacteria, although on the approved 2006 303(d) list and the proposed 2008 303(d) list, is not considered a pollutant of concern because roadways are not typical sources of indicator bacteria.

Caltrans conducted a Discharge Characterization Study that compiled and analyzed water quality data from various Caltrans facilities. The data for highway runoff covered three wet seasons from 2000-2001 through 2002-2003. The data from that report is reproduced in Table 11 and shows the number of data points, number of sampling sites, and percent of samples above the detection limits and statistics for a range of constituents including hydrocarbons, metals, pesticides, and semi-volatile organics.

Table 11
Caltrans Highway Runoff Water Quality Data

Pollutant Category	Pollutant	Units	N	Number of Sites	Percent Detected	Min	Max	Median	Mean	Std. Dev.
Conventionals	DOC	mg/L	635	46	100	1.2	483	13.1	18.7	26.2
	pH	pH	633	46	100	4.47	10.1	7	7.1	0.7
	TDS	mg/L	635	46	97	3.7	1800	60.3	87.3	103.7
	TOC	mg/L	635	46	100	1.6	530	15.3	21.8	29.2
	TSS	mg/L	634	46	99	1	2988	59.1	112.7	188.8
	Turbidity	NTU	—	—	—	—	—	—	—	—
Hydrocarbons	Oil & Grease	mg/L	49	10	29	5	61	1.44	4.95	11.41
	TPH (Diesel)	mg/L	32	4	97	0.22	13	2.52	3.72	3.31
	TPH (Gasoline)	mg/L	32	4	0	ND	ND	ND	IDD	IDD
	TPH (Heavy Oil)	mg/L	20	4	95	0.12	13	1.4	2.71	3.4
Metals	As, dissolved	µg/L	635	46	40	0.5	20	0.7	1	1.4
	As, total	µg/L	635	46	62	0.5	70	1.1	2.7	7.9
	Cd, dissolved	µg/L	635	46	42	0.2	8.4	0.13	0.24	0.54
	Cd, total	µg/L	635	46	76	0.2	30	0.44	0.73	1.61
	Cr, dissolved	µg/L	635	46	80	1	23	2.2	3.3	3.3
	Cr, total	µg/L	635	46	97	1	94	5.8	8.6	9
	Cu, dissolved	µg/L	635	46	100	1.1	130	10.2	14.9	14.4
	Cu, total	µg/L	635	46	100	1.2	270	21.1	33.5	31.6
	Hg, dissolved	ng/L	19	4	16	2.5	110	IDD	IDD	IDD
	Hg, total	ng/L	23	4	39	7.8	160	26	36.7	37.9
	Ni, dissolved	µg/L	635	46	79	1.1	40	3.4	4.9	5
	Ni, total	µg/L	635	46	95	1.1	130	7.7	11.2	13.2

Source: Water Quality Assessment Report, 2010.

The Local Implementation Plan identifies various treatment BMPs, along with the pollutants of concern addressed by each measure. Priority projects that are not anticipated to generate a primary pollutant of concern are required to select a single or combination of storm water treatment control BMPs. The treatment control BMPs from the Local Implementation Plan are provided in Table 12.

Table 12
Treatment Control BMP Selection Matrix^{a,b}

Pollutant of Concern	Treatment Control BMP Categories					
	Biofilters	Detention Basins	Infiltration Basins	Wetponds or Wetlands	Filtration	Hydrodynamic Separator Systems
Sediment/Turbidity	H/M	H/M	H/M	H/M	H/M	H/M (L for Turbidity)
Nutrients	L	H/M	H/M	H/M	H/M	L
Heavy Metals	M	M	H	H	H	L
Organic Compounds (Petroleum Hydrocarbons and Oil and Grease)	U	U	U	U	H/M	L
Pesticides (non-soil bound)	U	U	U	U	U	L
Trash and Debris	L	H/M	U	U	H/M	H/M
^a DAMP Table 7-II-6, except for the Heavy Metals treatment performance, which is from the California Stormwater Best Management Practices Handbook for New Development and Redevelopment (CASQA, 2003) ^b H, M, L, and U indicate high, medium, low, and unknown removal efficiencies, respectively.						

The evaluation of BMPs for Antonio Parkway divided the roadway into two segments: (1) the area from the northern project limits to the northern limits of San Juan Creek and (2) the San Juan Creek Bridge and the area to the southern project limits. The proposed treatment-control BMPs were selected to address the pollutants of concern in storm water discharges from the project with medium or high effectiveness, as required by the DAMP.

Runoff from Antonio Parkway north of San Juan Creek would be treated using cartridge media filtration (CMF) or an equivalent proprietary BMP. The preferred cartridge filter media is a combination of perlite, zeolite, and granular activated carbon. The cartridges would be located in a centralized vault near the existing stormwater discharge outfall next to San Juan Creek.

The runoff from the new Antonio Parkway Bridge, Antonio Parkway south of the bridge to SR-74, and the small area of La Pata Avenue south of SR-74 would be treated in the proposed water quality basin that would be constructed at the northeastern corner of the Antonio Parkway and SR-74 intersection. Implementation of these BMPs will meet the requirements of the applicable NPDES permit as required in the County of Orange DAMP and LIP.

The existing San Juan Creek Bridge drains through deck inlets for direct discharge to San Juan Creek. Retrofitting the existing bridge deck with a storm drain system is not required with current water quality standards. Under the County's DAMP, retrofitting the existing bridge is not required because the percentage increase in impervious surface is less than 50 percent of the amount of existing impervious area. Therefore, the County would not be required to treat runoff from the existing portion of the bridge.

The potential construction impacts on water quality during the construction phase are primarily due to sediment and certain non-sediment related pollutants. Non-sediment-related pollutants include construction materials or the maintenance of heavy equipment; and concrete-related pollutants. Short-term construction impacts would be addressed through erosion and sediment control BMPs. Erosion control measures are designed to prevent erosion, whereas sediment controls are designed to trap or filter sediment once it has been mobilized. A SWPPP would be developed in compliance with, the Construction General Permit and the County of Orange Standard Conditions, which also includes BMPs for construction related pollutants.

The proposed project is covered by the Waste Discharge Requirements and Clean Water Act Section 401 Water Quality Certification (Order No. R9-2006-0104) issued by the San Diego RWQCB to Rancho Mission Viejo Community Development, LLC, for the Rancho Mission Viejo Ranch Plan Planning Area 1 project on October 16, 2006.

No Build (No Action) Alternative

The No Build Alternative would not result in impacts to water quality standards or to the Natural and Beneficial Floodplain Values.

Avoidance, Minimization, and/or Mitigation Measures

Project design has incorporated appropriate BMPs to adequately treat storm water runoff. The project would not contribute to primary pollutants of concern. The following standard condition would apply to the project; however, no additional measures are required.

- WQ-1 Preparation and implementation of construction site BMPs in compliance with the provisions of the Construction General Permit ((NPDES No. CAS000002) Water Quality Order 2009-0009-DWQ, State Water Resources Control Board (SWRCB) National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction Activity) and any subsequent permit as they relate to construction activities for the project. This will include submission of a Notice of Intent (NOI) to the San Diego RWQCB at least 30 days before the start of construction, preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP), and submission of a Notice of Construction Completion (NCC) to the San Diego RWQCB upon completion of construction and stabilization of the project site.
- WQ-2 Consideration and incorporation of source control and treatment control best management practices (BMPs) for the project in accordance with the procedures outlined in the Drainage Area Master Plan and Local Implementation Plan (2003 or subsequent issuance) will be followed.
- WQ-3 During dewatering activities, if necessary, the provision of "General Waste Discharge Requirements for Discharges from Groundwater Extraction and Similar Discharges to Surface Waters within the San Diego Region except for San Diego Bay (WDR)" [Order No. R9-2008-0002, NPDES No. CAG919002] for regions other than San Diego Bay, and comply with the "General Waste Discharge Requirements for Temporary Groundwater Extraction and Similar Waste Discharges to San Diego Bay and Storm Drains or other conveyance systems tributary thereto" [Order No. 2000-09; NPDES No. CAG919001] for

discharges to the San Diego Bay area, as they relate to construction activities for the project, will be followed. This will include submission of an NOI to the San Diego RWQCB at least three months before the start of dewatering and compliance with all applicable provision in the de minimus permit, Antonio Parkway Water Quality Assessment Report 33 26.02.2010 including water sampling, analysis, and reporting of dewatering-related discharges.

Geology/Soils/Seismic/Topography

Regulatory Setting

For geologic and topographic features, the key federal law is the Historic Sites Act of 1935, which establishes a national registry of natural landmarks and protects “outstanding examples of major geological features.”

Affected Environment

This section summarizes information provided in the *Antonio/La Pata Widening Geotechnical Overview* (December 2006).

Geologic Formation and Soils

The predominant geologic materials in the proposed project site area include the following:

- Engineered Fill;
- Topsoil;
- Alluvial and Colluvial Deposits; and
- Terrace Deposits.

Portions of Antonio Parkway and La Pata Avenue are underlain by bedrock of the Monterey Formation and Topanga Formation.

The Topanga Formation has been observed locally to be highly interfingered with bedrock of the San Onofre Breccia. The San Onofre Breccia consists of damp and dense to very dense sandy gravel to clayey gravel with large angular boulders up to six feet in diameter.

Seismicity

Most of Southern California is subject to some level of ground shaking or ground motion due to movement along active and potentially active fault zones in the region. Several sizeable, historic earthquakes have occurred in Southern California. Given the proximity of the project site to several active and potentially active faults, the site will likely be subject to earthquake ground motions in the future. The level of ground motion at a given site resulting from an earthquake is a function of several factors, including earthquake magnitude, type of faulting, rupture propagation path, distance from the epicenter, earthquake depth, duration of shaking, site topography, and site geology.

No known active or potentially active faults are shown as crossing the site on currently available geologic maps. The site is not within a designated Alquist-Priolo

Earthquake Fault Zone. However, the site is located within close proximity of several surface faults that are presently zoned as active or potentially active by the California Geological Survey pursuant to the guidelines of the Alquist-Priolo Earthquake Fault Zoning Act. The intersection of Antonio Parkway/La Pata Avenue/SR-74 is approximately six miles east of the San Joaquin Hills Blind Thrust and eight miles east of the Newport-Inglewood Fault.

Groundwater

Groundwater is present at the project site in the form of unconfined groundwater within saturated alluvial deposits. This condition occurs within and immediately adjacent to the San Juan Creek floodplain, where groundwater is typically within five feet of the San Juan Creek valley line elevation. Minor groundwater is also present in the form of seepage that emanates from bedding planes, geologic contacts, fractures in bedrock units, and along geologic contacts. The majority of the designed roadway grading will not be influenced by groundwater due to the shallow corrective grading and lack of significant designed cuts.

Liquefaction

A liquefaction analysis was performed for the alluvial areas adjacent to San Juan Creek. Results of the analysis indicate that isolated zones within the alluvial sediments near the Antonio Parkway Bridge may be subject to liquefaction during a seismic event. Liquefaction potential below the remainder of the site is negligible.

Landslides

Landslide complexes exist downhill and west of Antonio Parkway on the northern side of San Juan Creek. With respect to the existing roadway, these landslides have been stabilized by the designed and corrective grading for the existing roadway fills. A substantial landslide complex potentially exists uphill and east of La Pata Avenue. However, the planned improvements would serve to increase the stability of the existing and planned roadway.

Environmental Consequences

Build Alternative "Proposed Project" (Preferred Alternative)

Geologic Formation and Soils

The preliminary grading for the widening of Antonio Parkway was previously completed south to the San Juan Creek Bridge as part of the initial phase of roadway construction. Therefore, the project would result in minimal topographic modification. As with all grading activities, there would be an increased potential for erosion during construction. Once construction is completed and the site is revegetated, there would not be an increased erosion potential.

The site is located in an area where the underlain soils include substantial amounts of engineered fill that was placed to construct the existing lanes of Antonio Parkway. The site also contains quaternary alluvial and colluvial deposits primarily concentrated within and south of the San Juan Creek floodplain, and a relatively thin layer of topsoil. As such, the potential for substantial soil erosion would be considered relatively low

during project operation. This impact would be considered less than substantial with implementation of standard provisions related to the project.

Liquefaction

As discussed previously, results of the liquefaction analysis indicate that isolated zones within the alluvial sediments near the Antonio Parkway Bridge may be subject to liquefaction during a seismic event. However, liquefaction potential at the overall project site is considered low. Implementation of standard engineering practices would correct this condition and enable the bridge to withstand liquefaction during a seismic activity.

Seismicity

As previously indicated, there are no known active or potentially active faults crossing the project site and the site is not within a designated Alquist-Priolo Earthquake Fault Zone. However, the project site, as with Southern California in its entirety, is subject to the adverse effects of seismic activity emanating from active faults. The principal geological constraint for the project site is the potential for ground shaking and ground motion given the proximity of the project site to several active and potentially active faults.

Potential adverse effects associated with geotechnical constraints would be reduced to an acceptable level because the project would be required to comply with the design and construction requirements of the *Orange County Grading Code and Manual* and with all applicable seismic standards.

No Build (No Action) Alternative

There would be no change from current conditions with the No Build Alternative.

Avoidance, Minimization, and/or Mitigation Measures

The BMPs identified under Water Quality would minimize the erosion impacts associated with construction activities for the proposed project. The following standard provisions, applicable to all Department projects, will be implemented.

- G-1 The proposed project shall comply with all applicable County of Orange standards related to design and construction, as delineated in the *Orange County Grading Code and Manual*.
- G-2 During final design, foundations supporting the proposed bridge shall be designed to withstand the effects of soil liquefaction. Ground improvements at bridge and retaining wall locations shall be determined during final design.

Hazardous Waste/Materials

Regulatory Setting

Hazardous materials and hazardous wastes are regulated by many federal laws. These include not only specific statutes governing hazardous waste, but also a variety of laws regulating air and water quality, human health and land use.

The primary federal laws regulating hazardous wastes/materials are the Resource Conservation and Recovery Act of 1976 (RCRA) and the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA). The purpose of CERCLA, often referred to as Superfund, is to clean up contaminated sites so that public health and welfare are not compromised. RCRA provides for “cradle to grave” regulation of hazardous wastes. Other federal laws include:

- Community Environmental Response Facilitation Act (CERFA) of 1992
- Clean Water Act
- Clean Air Act
- Safe Drinking Water Act
- Occupational Safety & Health Act (OSHA)
- Atomic Energy Act
- Toxic Substances Control Act (TSCA)
- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

In addition to the acts listed above, Executive Order 12088, Federal Compliance with Pollution Control, mandates that necessary actions be taken to prevent and control environmental pollution when federal activities or federal facilities are involved.

Worker health and safety and public safety are key issues when dealing with hazardous materials that may affect human health and the environment. Proper disposal of hazardous material is vital if it is disturbed during project construction.

Affected Environment

Methodology

The information in this section is based on a Phase I Environmental Assessment and Initial Site Assessment for Hazardous Wastes (March 2009). The study was done in conformance with the scope and limitations of ASTM Designation E1507-05. This study addressed the area from the southern edge of the San Juan Creek Bridge to the northern project limits. Information for the portion of the study area south of the San Juan Creek Bridge was obtained from three sources: (1) Phase I Environmental Site Assessment for the Ranch Plan Planning Area 1 (February 2004); (2) Addendum to Phase I Environmental Site Assessment for Planning Area 1 (September 2006); and (3) a memorandum dated April 21, 2009, which provided responses to the Department’s comments dated January 28, 2009. This latter document was in association with the widening of SR-74 in the project study area.

The purpose of the Phase I is to assess the presence or likely presence of an existing, historical, or threatened release of any hazardous substances or petroleum products into structures, soil, and/or groundwater beneath the subject property, to the extent practical (i.e., “recognized environmental conditions” as delineated in ASTM E1527-05).

The Phase I included a review of past Phase I assessments that have been conducted for properties adjacent to the project including the following studies:

- Environmental Impact Report for the Antonio Parkway Roadway Alignment and Land Use Plan, Appendix H – Hazardous Materials Environmental Assessment (May 1995);
- Phase I Environmental Site Assessment – D&M Color Express, 29001 and 29813 Ortega Highway, San Juan Capistrano, CA (June 2001);
- Phase I Environmental Site Assessment – Miramar Nursery, 2813 Ortega Highway, San Juan Capistrano, CA (June 2001);
- Phase I Environmental Site Assessment – Joan Irvine Smith Pasture, NWC Ortega Highway and Antonio Parkway, San Juan Capistrano, CA (January 2002);
- Soil Investigation Report and Mitigation Work Plan for Subareas 1.3 and 1.4, Rancho Mission Viejo, San Juan Capistrano, CA (January 2007).

As part of the Phase I evaluations, known electronic database listings were reviewed for possible hazardous waste generating establishments in the vicinity of the project site and for adjacent sites with known environmental concerns. The site was not listed on any of the databases reviewed as having environmental concerns. The Orange County Fire Authority and Health Care Agency, the California Department of Toxic Substances Control (DTSC), the Santa Ana Regional Water Quality Control Board (RWQCB), and other State and federal databases were reviewed to determine if the project site, or any adjacent sites, were listed as hazardous waste generators, underground storage tank releases (UST), or as having other environmental concerns (i.e., spill, leak, or aboveground tank).

Photographs of the site from 1938, 1946, 1952, 1960, 1977, 1989, 1994, 2002, and 2008 were reviewed to identify historical land uses and surface conditions. Topographic maps from 1949, 1975, 1988, and 1997 were also reviewed.

A site reconnaissance was performed on February 11, 2009, to physically observe the site and adjoining properties for conditions indicating a potential recognized environmental concern. Concerns would include any evidence of contamination, distressed vegetation, petroleum-hydrocarbon staining, waste drums, illegal dumping, or improper waste storage and/or handling.

On-Site Land Uses

Based on the historical document review, the land use history of the site includes undeveloped vacant land and/or agricultural usage since at least 1938. Between 1995 and 2002, Antonio Parkway was constructed in its current configuration, including the bridge over San Juan Creek.

The project site was not listed on any of the databases searched.

Adjoining Property

The adjoining property is comprised of open space areas that include undeveloped vacant land and/or agricultural usage. The Miramar Nursery was located at the southeastern corner of SR-74 and La Pata Avenue. D&M Color Express was located

north of SR-74 both east and west of Antonio Parkway. The leases for these uses expired and they have subsequently relocated. The Rancho Mission Viejo Riding Park at San Juan Capistrano is located at the southwest corner of SR-74 and La Pata Avenue.

Historical records reveal the use of pesticides at the nursery sites. An underground gasoline storage tank was located beneath a wind machine on the D&M Color Express site. The tank was removed in 1984. Soil sampling conducted in November 2001 in the vicinity of the UST location indicated no evidence of petroleum hydrocarbon contamination.

North of SR-74 are one abandoned 10-inch and one active 16-inch underground petroleum pipeline. The pipeline was recently relocated (deepened) to accommodate highway construction. At that time, there was no evidence of contaminated soil observed.

An area of chlordane-impacted surface soil is located over 500 feet southeast of the site on property previously used as a nursery. The soil is being mitigated under Orange County Health Care Agency (OCHCA) oversight. Soil samples were collected in August 2006. Concentrations of chlordane in several samples were above the California Human Health Screening Levels (CHHSL) thresholds for residential uses. In January 2007, a mitigation plan was submitted to OCHCA for the excavation and relocation of approximately 34,644 cubic yards of impacted soil, based on a uniform depth of 3 feet.

Site Conditions

None of the property on site was identified as having hazardous materials in the various database searches that were conducted. No evidence of recognized environmental conditions was noted on the subject property during the site reconnaissance.

Environmental Consequences

Build Alternative "Proposed Project" (Preferred Alternative)

On-Site Hazardous Materials

Based on the findings of the Phase I assessment, there is no evidence of recognized environmental conditions (RECs) on the project site. It was also determined that the chlordane-impacted area would have not affect the proposed project site. On April 3, 2009, the County of Orange Manager of Environmental Resources provided a memorandum stating that the Phase I study satisfied the County's requirements for a Hazardous Materials Assessment for a County road improvement project and associated easement acquisitions.

Use and Transport of Hazardous Materials

Due to the nature of the project as a transportation facility, it is expected that traffic using Antonio Parkway may include vehicles transporting hazardous materials or waste. Antonio Parkway provides access to the Prima Deshecha Landfill. Though it is a Class I landfill (i.e., it does not accept hazardous materials), it is reasonable to assume that materials classified as hazardous materials would on occasion be mixed

in with household trash. However, this risk would be no greater than the risk of trash collection trucks traveling on other local streets. The County standard roadway design criteria and compliance with applicable construction procedures would adequately reduce the risk to the public of exposure to hazardous materials. There would be no greater risk of an accidental explosion or release of hazardous substances than what exists under current conditions.

Asbestos-Containing Materials

Asbestos, a natural fiber used in the manufacturing of a number of different buildings materials, has been identified as a human carcinogen. Most friable (i.e., easily broken or crushed) asbestos-containing materials (ACMs) were banned in building materials by 1978. By 1989, most major manufacturers had voluntarily removed non-friable ACMs (i.e., flooring, roofing, and mastics/sealants) from the market. These materials, however, were not banned completely.

The project would involve minor demolition associated with utility relocation and inside bridge railings. These improvements were installed with the initial construction of the roadway after 1995. Therefore, ACMs are not anticipated. There are no structures within the project area that would be demolished or removed. No impacts are expected.

Lead-Based Paint

Lead-based paint is identified by Occupational Safety and Health Agency (OSHA), the U.S. Environmental Protection Agency (USEPA), and the Department of Housing and Urban Development (HUD) as being a potential health risk to humans, particularly children, based upon its effects to the central nervous system, kidneys, and bloodstream. The risk of lead-based paint has been classified by HUD based upon the age and condition of the painted surface. Paint applied after 1977 is not expected to contain lead.

The project would involve the removal of paint on the roadway and potentially on the bridge structure. These facilities were built after 1977; therefore, the likelihood of encountering lead-based paint is limited. There are no structures located on the project site. Therefore, the presence of lead-based paint associated with removal of structures is not anticipated.

Radon

Radon is a radioactive gas that has been identified as a human carcinogen. Radon gas is typically associated with fine-grained rock and soil, and results from the radioactive decay of radium. Sections 307 and 309 of the indoor Radon Abatement Act of 1988 (IRAA) directed the USEPA to list and identify areas of the U.S. with the potential for elevated indoor radon levels. Based on such factors as indoor radon measurements, geology, aerial radioactivity, and soil permeability, the USEPA has identified Orange County as Zone 3 (i.e., low potential for radon gas). This project does not involve the construction of any indoor facilities. Therefore, radon gas would not be a consideration for this project.

Aerially Deposited Lead

The presence of aerially deposited lead is a greater issue along older highways that would have been in use when lead was placed in gasoline. This is especially an issue for those roadways that had high traffic volumes. Antonio Parkway was constructed after the use of lead in gasoline was regulated. Though SR-74 is an older highway, the traffic volumes on this roadway have been historically low. In addition, the portion of SR-74 within the project study area is under construction. Therefore, aerially deposited lead in the soil would no longer be an issue.

No Build (No Action) Alternative

There would be no construction-related impacts associated with the No Build Alternative. Potential impacts associated with long-term operation of Antonio Parkway would not be substantially changed.

Avoidance, Minimization, and/or Mitigation Measures

The following pre-construction measures are standard provisions that are routinely applied to projects to ensure that projects implement the applicable federal, State, and local rules and regulations for the safe handling of hazardous materials.

- HZ-1 Prior to the initiation of construction, the contractor shall develop an approved Health and Safety Contingency Plan (HSCP) in the event that unanticipated/unknown environmental contaminants are encountered during construction. The plan shall be developed to protect workers, safeguard the environment, and meet the requirements of Title 8 of the *California Code of Regulations* (CCR), “General Industry Safety Orders – Control of Hazardous Substances”.

The HSCP shall be prepared as a supplement to the Contractor’s Site-Specific Health and Safety Plan, which shall be prepared to meet the requirements of CCR Title 8, “Construction Safety Orders”.

Air Quality

Regulatory Setting

The Clean Air Act as amended in 1990 is the federal law that governs air quality. Its counterpart in California is the California Clean Air Act of 1988. These laws set standards for the quantity of pollutants that can be in the air. At the federal level, these standards are called National Ambient Air Quality Standards (NAAQS). Standards have been established for six criteria pollutants that have been linked to potential health concerns; the criteria pollutants are: carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), particulate matter (PM), lead (Pb), and sulfur dioxide (SO₂).

Under the 1990 Clean Air Act Amendments, the U.S. Department of Transportation cannot fund, authorize, or approve Federal actions to support programs or projects that are not first found to conform to State Implementation Plan for achieving the goals of the Clean Air Act requirements. Conformity with the Clean Air Act takes place on two levels—first, at the regional level and second, at the project level. The proposed project must conform at both levels to be approved.

Regional level conformity in California is concerned with how well the region is meeting the standards set for carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), and particulate matter (PM). California is in attainment for the other criteria pollutants. At the regional level, Regional Transportation Plans (RTP) are developed that include all of the transportation projects planned for a region over a period of years, usually at least 20. Based on the projects included in the RTP, an air quality model is run to determine whether or not the implementation of those projects would conform to emission budgets or other tests showing that attainment requirements of the Clean Air Act are met. If the conformity analysis is successful, the regional planning organization, such as the Southern California Association of Governments (SCAG) for Orange County and the appropriate federal agencies, such as the Federal Highway Administration, make the determination that the RTP is in conformity with the State Implementation Plan for achieving the goals of the Clean Air Act. Otherwise, the projects in the RTP must be modified until conformity is attained. If the design and scope of the proposed transportation project are the same as described in the RTP, then the proposed project is deemed to meet regional conformity requirements for purposes of project-level analysis.

Conformity at the project-level also requires “hot spot” analysis if an area is “nonattainment” or “maintenance” for carbon monoxide (CO) and/or particulate matter. A region is a “nonattainment” area if one or more monitoring stations in the region fail to attain the relevant standard. Areas that were previously designated as nonattainment areas but have recently met the standard are called “maintenance” areas. “Hot spot” analysis is essentially the same, for technical purposes, as CO or particulate matter analysis performed for NEPA purposes. Conformity does include some specific standards for projects that require a hot spot analysis. In general, projects must not cause the CO standard to be violated, and in “nonattainment” areas the project must not cause any increase in the number and severity of violations. If a known CO or particulate matter violation is located in the project vicinity, the project must include measures to reduce or eliminate the existing violation(s) as well.

Affected Environment

Information presented in this section is based on the *Air Quality Assessment for Antonio Parkway Widening* (February 2010).

Climate

The project is located in the South Coast Air Basin (SoCAB). The climate in and around the project area, as with all of Southern California, is controlled largely by the strength and position of the subtropical high pressure cell over the Pacific Ocean. It maintains moderate temperatures and comfortable humidity, and limits precipitation to a few storms during the winter “wet” season. Temperatures are normally mild, except during summer months, which commonly bring substantially higher temperatures. In all portions of the basin, temperatures well above 100 degrees Fahrenheit (°F) have been recorded in recent years. The annual average temperature in the basin is approximately 62°F.

Winds in the project area are usually driven by the dominant land/sea breeze circulation system. Regional wind patterns are dominated by daytime onshore sea breezes. At night the wind generally slows and reverses direction traveling towards the sea. Local canyons alter wind direction, with wind tending to flow parallel to the

canyons. During the transitional period from one wind pattern to the other, the dominant wind direction rotates into the south and causes a minor wind direction maximum from the south. The frequency of calm winds (less than two miles per hour) is less than ten percent. Therefore, there is little stagnation in the project vicinity, especially during busy daytime traffic hours.

Southern California frequently has temperature inversions that inhibit the dispersion of pollutants. Inversions may be either ground-based or elevated. Ground-based inversions, sometimes referred to as “radiation inversions”, are most severe during clear, cold, early winter mornings. Under conditions of a ground-based inversion, very little mixing or turbulence occurs, and high concentrations of primary pollutants may occur locally on major roadways. Elevated inversions can be generated by a variety of meteorological phenomena. Elevated inversions act as a lid or upper boundary and restrict vertical mixing. Below the elevated inversion, dispersion is not restricted. Mixing heights for elevated inversions are lower in the summer and more persistent. This low summer inversion puts a lid over the SoCAB and is responsible for the high levels of ozone observed during summer months.

Local Air Quality Monitored Levels

The Mission Viejo monitoring station, located on Via Pera approximately eight miles northwest of the project site, is the nearest station. The data collected at the Mission Viejo station is considered representative of the air quality experienced in the vicinity of the project. The air pollutants measured at the Mission Viejo station include O₃, CO, PM₁₀, and PM_{2.5} (respirable particulate matter less than 10 microns and 2.5 microns in diameter, respectively). The monitoring data presented in Table 13 also present federal and State air quality standards.

The Mission Viejo monitoring data presented above in the three-year period show that O₃, PM₁₀, and PM_{2.5} are the air pollutants of primary concern in the project area. Other than O₃, PM₁₀ and PM_{2.5}, no State or federal standards were exceeded for the remaining criteria pollutants.

Table 13
Air Quality Levels Measured at Mission Viejo Monitoring Station

Pollutant	California Standard	National Standard	Year	% of Year Measured ^a	Max. Level	Days State Standard Exceeded ^b	Days National Standard Exceeded ^b
Ozone	0.09 ppm	None	2008	97	0.118	9	n/a
1-Hour			2007	99	0.108	5	n/a
Average			2006	96	0.123	13	n/a
Ozone	0.070 ppm	0.075 ppm	2008	97	0.104	25	15
8-Hour			2007	99	0.090	10	5
Average			2006	96	0.105	23	12
CO	20 ppm	35 ppm	2008	96	1.5	0	0
1-Hour			2007	97	2.9	0	0
Average			2006	99	1.9	0	0
CO	9.0 ppm	9 ppm	2008	96	1.1	0	0
8-Hour			2007	97	2.2	0	0
Average			2006	99	1.6	0	0
Respirable	50 µg/m ³	150 µg/m ³	2008	95	42	0/--	0/0
Particulates			2007	93	74	3/--	0/0
PM10			2006	75	57	0/--	0/--
24-Hour Average							
Respirable	20 µg/m ³	None	2008	92	22	Yes	No
Particulates			2007	93	23	Yes	No
PM10			2006	75	21	Yes	No
AAM							
Fine	None	35 µg/m ³	2008	99	32.6	n/a	0/0
Particulates			2007	79	46.8	n/a	2/--
PM2.5			2006	84	46.9	n/a	1/--
24-Hour Average							
Fine	12 µg/m ³	15 µg/m ³	2008	99	10.4	No	No
Particulates			2007	79	--	--	--
PM2.5			2006	84	--	--	--
AAM							
-- Data Not Reported; CO: carbon monoxide; PM10: particulate matter less than 10 microns in diameter; PM2.5: particulate matter less than 2.5 microns in diameter; AAM: annual arithmetic mean; ppm: parts per million; µg/m ³ : micrograms per cubic meter; n/a: no applicable standard ^a Percent of year valid measurements were obtained. ^b For annual averaging times, a "yes" or "no" response is given if the annual average concentration exceeded the applicable standard. For the PM10 24-hour standard, daily monitoring is not performed. The first number shown in Days State Standard Exceeded column is the actual number of days measured where the State standard was exceeded. The second number shows the number of days the standard would be expected to be exceeded if measurements were taken every day. Source: Mestre-Greve Associates 2010.							

Environmental Consequences

Build Alternative “Proposed Project” (Preferred Alternative)

Regional Air Quality Conformity

The proposed project is fully funded and is in the 2008 RTP, Amendment No. 2, which was found to conform to the SIP by SCAG on December 3, 2009. The RTP ID number is 2A0803. The proposed Project is also included in the 2008 RTIP, Amendment No.08-24; and the Project ID number is ORA020803. The FHWA and the FTA air quality conformity finding for the RTP and RTIP amendments were approved on January 22,2010. The 2008 RTIP identifies the project as follows: “Build out Antonio Parkway to its Master Plan of Arterial Highways Designation width between Ladera Planned Community and Ortega Highway by widening the road from four to six lanes. The Project will include widening Antonio Parkway Bridge by one lane in each direction”.The design concept and scope of the proposed project is consistent with the project description in the 2008 RTP, the 2008 RTIP, and the assumptions in the SCAG regional emissions analysis.

The project also includes the widening of 900 feet of La Pata Avenue (the continuation Antonio Parkway south of Ortega Highway) to facilitate traffic operations. The widening of La Pata Avenue is include in the 2008 RTIP and RTIP as project number ORA120504. The project is described in the RTIP as follows, “Orange County – La Pata Avenue widenign and gap closure – add 4 lns (existing La Pata terminus to Calle Saluda); extension – add 4 lanes (existing Camino Del Rio terminus to La Pata). The remaining widening and gap closure of La Pata Avenue will be completed as a separate project.

Project Level Conformity

Table 14 below, shows the area designations for the SoCAB and the required attainment dates for the nonattainment pollutants. This table shows that the SoCAB is in nonattainment for the national ozone, PM10, and PM2.5 standards. The SoCAB is also in nonattainment for the State ozone, PM10, and PM2.5 standards.

This table shows that SoCAB is in nonattainment for the Federal O₃, PM10, and PM2.5 standards. SoCAB is also in nonattainment for the State O₃, PM10, and PM2.5 standards. The region was designated an attainment area for the CO standards on June 11, 2007. As a requirement for project-level conformity, a CO and PM analysis must be performed to estimate potential air quality impacts generated from the operation of the proposed project. Because the project area has been designated by the USEPA as in maintenance/attainment for CO and non-attainment for PM10 and PM2.5 according to the NAAQS, localized hot spot impacts must be assessed for CO and PM. An Air Quality Conformity Analysis Report was prepared and submitted to the FHWA. In a letter dated April 26, 2010, the FHWA issued a conformity determination. This letter is included in Chapter 3.

Table 14
Designations of Criteria Pollutants for the SoCAB

Pollutant	Federal	State
Ozone (O ₃)	Severe-17 Nonattainment (2021)	Nonattainment
Respirable Particulate Matter (PM ₁₀)	Serious Nonattainment	Nonattainment
Fine Particulate Matter (PM _{2.5})	Nonattainment (2015)	Nonattainment
Carbon Monoxide (CO)	Attainment/Maintenance	Attainment
Nitrogen Dioxide (NO ₂)	Attainment/Maintenance	Attainment
Sulfur Dioxide (SO ₂)	Attainment	Attainment
Lead	Attainment†	Attainment
Visibility Reducing Particles	No Standard	Unclassified
Sulfates	No Standard	Unclassified
Hydrogen Sulfide	No Standard	Attainment
Vinyl Chloride	No Standard	Attainment
Source: Mestre Greve Associates 2010.		

Carbon Monoxide

The CO hot spot analysis for the proposed project was conducted in accordance with the screening methodology in the Transportation Project-Level Carbon Monoxide Protocol (CO Protocol).

The Antonio Parkway/La Pata Avenue/SR-74 intersection is identified as the intersection with the greatest peak hour traffic volumes under the 2035 Without the SR-241 Extension scenario. Figure 24 depicts the location of the reference point for the air quality analysis. This intersection would be operating at LOS E and is considered to have the potential to exceed the NAAQS. Forecast traffic volumes at this intersection are greater than the traffic volumes at the intersections modeled by the SCAQMD for the 2005 CO Attainment Plan. While the Antonio Parkway/La Pata Avenue/SR-74 intersection represents the worst-case scenario in terms of CO concentration. If the CO modeling shows that the CO emissions at this location would meet the NAAQS, then emissions at all other intersections in the project area would also meet the standards.

CO protocol modeling for the Antonio Parkway/La Pata Avenue/SR-74 intersection was performed utilizing the CALINE4 computer model. A receptor was located at each of the four corners approximately ten feet from the edge of the road. Composite emission factors utilized with the CALINE4 computer model were derived from EMFAC2007 based on the methodology described on Caltrans' air quality website. The peak hour traffic and truck data used in the CALINE4 CO computer modeling were obtained from the traffic study prepared by Austin-Foust Associates in December 2009. Projected background CO concentrations of 2.9 ppm for 1 hour and 1.8 ppm for 8 hours were obtained from the SCAQMD forecasts for the El Toro monitoring site for year 2015 and beyond.

The CO modeling results for the projected future 1-hour and 8-hour CO concentration levels indicate that the 2035 CO concentration levels are 3.7 ppm for

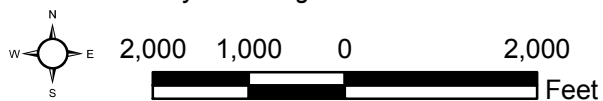
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Reference Point for Air Quality Analysis

Figure 24

Antonio Parkway Widening



1 hour and 2.4 ppm for 8 hours. These concentrations are well below the 1-hour NAAQS of 35 ppm and the 8-hour standard of 9 ppm. There would be no exceedance of the standards.

PM2.5 and PM10

The FHWA and the USEPA jointly released the Transportation Conformity Guidance for Qualitative Hot-spot Analyses in PM2.5 and PM10 Nonattainment and Maintenance Areas (PM Guidance) on March 29, 2006. The Final Rule for transportation conformity was promulgated on March 10, 2006, and became effective on April 5, 2006, for PM2.5 and PM10 nonattainment areas. Clean Air Act section 176(c)(1)(B) is the statutory criterion that must be met by all projects in nonattainment and maintenance areas that are subject to transportation conformity. To meet statutory requirements, the March 2006 Final Rule requires that PM2.5 and PM10 hot spot analyses be performed for projects of air quality concern (POAQC). Qualitative hot spot analyses would be conducted for these projects before appropriate methods and modeling guidance are available and quantitative PM2.5 and PM10 hot spot analyses are required. In addition, through the final rule, the USEPA determined that projects not identified as POAQC have also met statutory requirements without any further hot spot analyses.

The Antonio Parkway project was evaluated by the SCAG Transportation Conformity Working Group (TCWG) on January 26, 2010. The project was determined not to be a POAQC by the TCWG.

The project was considered in the category “new or expanded highway that primarily services gasoline vehicle traffic”, and would not involve or cause a significant increase in the number of diesel vehicles although diesel vehicles are expected to use the roadway. The project area is impacted primarily by truck traffic from the Prima Deshecha Landfill. Since the project would not have any effect on diesel truck traffic in the area, accordingly, the TCWG determined that this project is not a POAQC. No further analysis is required.

Construction Impacts

The project would involve demolition, grading, trenching, and construction of a new bridge. Short-term impacts to air quality would occur during installation of the signal upgrades and possibly during re-surfacing of the intersection. Additional sources of construction-related emissions include exhaust emissions and potential odors from construction equipment used on the construction site and the vehicles used to transport materials to and from the site, and exhaust emissions from the motor vehicles of the construction crew.

Project construction would result in temporary CO, NOx, reactive organic gases (ROGs), PM10, and PM2.5 emissions. A qualitative construction emissions analysis concludes that project construction would not create adverse pollutant emissions.

The proposed project would be subject to the following mitigation measures summarized below under the Avoidance, Minimization, and Mitigation Measures heading. After construction of the project is complete, all construction-related impacts would cease, thus resulting in a less than significant impact.

Naturally Occurring Asbestos (NOA) and Structural Asbestos

The proposed project is not in a known or suspected asbestos area. No analysis is required. While unlikely, if naturally occurring asbestos, serpentine, or ultramafic rock is discovered during grading operations, Title 17 of the *California Code of Regulations*, Section 93105, requires notification of the SCAQMD by the next business day and implementation of mitigation measures to minimize dust emissions within 24 hours. Since grading associated with the project is minor, it is highly unlikely that these measures would need to be implemented.

Mobile Source Air Toxics

Mobile Source Air Toxics (MSATs) are a subset of the 188 air toxics defined by the Clean Air Act. This study includes a qualitative analysis of the likely MSAT emissions impacts of this project per FHWA guidance (FHWA 2009).

However, available technical tools do not enable project-specific health impacts of the emission changes associated with the project to be predicted. Due to these limitations, the following discussion is included in accordance with CEQA regulations (40 CFR 1502.22[b]) regarding incomplete or unavailable information.

Evaluating environmental and health impacts from MSATs on a proposed roadway project would involve several key elements, including emissions modeling; dispersion modeling in order to estimate ambient concentrations resulting from the estimated emissions; exposure modeling in order to estimate human exposure to the estimated concentrations; and final determination of health impacts based on the estimated exposure. Each of these steps is encumbered by technical shortcomings or uncertain science that prevents a more complete determination of the MSAT health impacts of this project. A reliable quantitative assessment of the effects of air toxic emissions impacts on human health cannot be made at the project level. While available tools do allow us to reasonably predict relative emissions changes for larger projects, the amount of MSAT emissions from the project and MSAT concentrations or exposures created by the project cannot be predicted with enough accuracy to be useful in estimating health impacts. Therefore, due to the unavailable or incomplete information, it is not possible to make a determination of whether any of the alternatives would have “significant adverse impacts on the human environment”.

As discussed above, technical shortcomings of emissions and dispersion models and uncertain science with respect to health effects prevent meaningful or reliable estimates of the project’s MSAT emissions and effects. However, even though reliable methods do not exist to accurately estimate the health impacts of MSATs at the project level, it is possible to qualitatively assess the levels of future MSAT emissions under the project. Although a qualitative analysis cannot identify and measure health impacts from MSATs, it can give a basis for identifying and comparing the potential differences among MSAT emissions, if any, from various alternatives. The qualitative assessment presented below is derived in part from a study conducted by the FHWA entitled *A Methodology for Evaluating Mobile Source*

Air Toxic Emissions Among Transportation Project Alternatives.

The amount of MSAT emissions is proportionate to the vehicle miles traveled (VMT). This project is intended to improve traffic flow on Antonio Parkway by expanding

from two lanes in each direction to three lanes in each direction. The project is not anticipated to cause an increase or decrease of VMT for the area. Therefore, no significant change in MSAT emissions is expected. A very slight reduction in MSAT emissions may occur because there would be less congestion at the intersection of Antonio Parkway and SR-74. However, as discussed above, the magnitude and the duration of the potential decrease compared to the no-build alternative cannot be accurately quantified due to the inherent deficiencies of current models.

In the horizon year, Antonio Parkway (north of SR-74) is projected to handle up to 49,000 vehicles per day under the worst-case scenario. The heavy truck (vehicles with three axles or more) percentage on these roadways is at three percent. By 2035, this truck percentage is expected to decrease to two percent. Heavy trucks have higher MSAT emissions than do passenger vehicles. Because the project's traffic generation has a low amount of trucks, the project would not be expected to considerably increase MSAT emissions in the vicinity of the project. CARB and the USEPA vehicle and fuel regulations, coupled with fleet turnover, would cause substantial reduction over time that, in almost all cases, would cause MSAT levels to be significantly lower than today.

No Build (No Action) Alternative

As previously discussed, the No Build Alternative is considered the base case scenario and proposes that no improvements be implemented at this time. Because no improvements would be constructed, there would be no construction-related air quality impacts. However, without the roadway improvements local air quality would deteriorate due to increased vehicular congestion in the project study area.

Avoidance, Minimization, and/or Mitigation Measures

Construction impacts to air quality are short-term in duration, and therefore, would not result in adverse or long-term conditions. Implementation of the following measures will reduce air quality impacts resulting from construction activities: All construction vehicles and construction equipment would be required to be equipped with State-mandated emission control devices pursuant to State emissions regulations and standard construction practices.

AQ-1 During construction of the proposed project, the facility owner/developer and its contractors shall be required to comply with regional rules, which shall assist in reducing short-term air pollutant emissions. SCAQMD Rule 402 requires that air pollutant emissions not be a nuisance off-site. SCAQMD Rule 403 requires that fugitive dust be controlled with the best available control measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. Active construction operations shall utilize one or more of the applicable best available control measures identified in Tables 1 and 2 of Rule 403 to minimize fugitive dust emissions from each fugitive dust source type.

Noise

Regulatory Setting

The National Environmental Policy Act (NEPA) of 1969 provides the broad basis for analyzing and abating highway traffic noise effects. The intent of this law is to

promote the general welfare and to foster a healthy environment. The requirements for noise analysis and consideration of noise abatement under NEPA are described below.

National Environmental Policy Act and 23 CFR 772

For highway transportation projects with FHWA involvement (and the Department, as assigned), the federal-Aid Highway Act of 1970 and the associated implementing regulations (23 CFR 772) govern the analysis and abatement of traffic noise impacts. The regulations require that potential noise impacts in areas of frequent human use be identified during the planning and design of a highway project. The regulations contain noise abatement criteria (NAC) that are used to determine when a noise impact would occur. The NAC differ depending on the type of land use under analysis. For example, the NAC for residences (67 dBA) is lower than the NAC for commercial areas (72 dBA). Table 15 lists the noise abatement criteria for use in the NEPA-23 CFR 772 analysis.

Table 15
FHWA/Caltrans Noise Abatement Criteria (NAC)

Activity Category	NAC, Hourly A-Weighted Noise Level, dBA $L_{eq}(h)$	Description of Activities
A	57 Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose
B	67 Exterior	Picnic areas, recreation areas, playgrounds, active sport areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	72 Exterior	Developed lands, properties, or activities not included in Categories A or B above
D	–	Undeveloped lands.
E	52 Interior	Residence, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums

Table 16 lists the noise levels of common activities to enable readers to compare the actual and predicted highway noise-levels discussed in this section with common activities.

In accordance with the Department's *Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects, August 2006*, a noise impact occurs when the future noise level with the project results in a substantial increase in noise level (defined as a 12 dBA or more increase) or when the future noise level with the project approaches or exceeds the NAC. Approaching the NAC is defined as coming within 1 dBA of the NAC.

If it is determined that the project will have noise impacts, then potential abatement measures must be considered. Noise abatement measures that are determined to be reasonable and feasible at the time of final design are incorporated into the

project plans and specifications. This document discusses noise abatement measures that would likely be incorporated in the project.

Table 16
Noise Levels and Common Activities

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Jet Fly-over at 300m (1000 ft)	110	Rock Band
Gas Lawn Mower at 1 m (3 ft)	100	
Diesel Truck at 15 m (50 ft), at 80 km (50 mph)	90	Food Blender at 1 m (3 ft)
Noisy Urban Area, Daytime	80	Garbage Disposal at 1 m (3 ft)
Gas Lawn Mower, 30 m (100 ft)	70	Vacuum Cleaner at 3 m (10 ft)
Commercial Area		Normal Speech at 1 m (3 ft)
Heavy Traffic at 90 m (300 ft)	60	
Quiet Urban Daytime	50	Large Business Office
		Dishwasher Next Room
Quiet Urban Nighttime	40	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime		Library
Quiet Rural Nighttime	30	Bedroom at Night,
		Concert Hall (Background)
	20	Broadcast/Recording Studio
	10	
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

The Department's *Traffic Noise Analysis Protocol* sets forth the criteria for determining when an abatement measure is reasonable and feasible. Feasibility of noise abatement is basically an engineering concern. A minimum 5 dBA reduction in the future noise level must be achieved for an abatement measure to be considered feasible. Other considerations include topography, access requirements, other noise sources and safety considerations. The reasonableness determination is basically a cost-benefit analysis. Factors used in determining whether a proposed noise abatement measure is reasonable include: residents acceptance, the absolute noise level, build versus existing noise, environmental impacts of abatement, public and local agencies input, newly constructed development versus development pre-dating 1978 and the cost per benefited residence.

Affected Environment

Noise impacts relative to the local general plan noise policies were analyzed in the following project CEQA documents: Final EIR 555, prepared in 1995; Addendum to Final EIR 555; and Addendum No. 2 to Final EIR 589, which was approved by the County of Orange on December 31, 2008. The following discussion is based on the

In identifying noise impacts, primary consideration is given to exterior areas of frequent human use. Noise-sensitive receptors were identified in two areas (Area A and Area B) that have frequent outdoor human use and are subject to the FHWA NAC. The location of these areas is depicted in Figure 25.

Area A

Area A is located on the western side of Antonio Parkway at the northern end of the proposed project. A residential subdivision (Activity Category B) is located in this area. These homes are part of the Covenant Hills Development (Tract No. 15985) and front Mission Ridge Road with their rear yards exposed to Antonio Parkway. The homes are elevated above Antonio Parkway by between 60 and 80 feet. A glass sound barrier with a nominal height of six feet is located between Antonio Parkway and the rear yards.

Area B

Area B is located at the southwestern corner of the intersection of Antonio Parkway/Avenida La Pata and SR-74. This area is the site of the Rancho Mission Viejo Riding Park at San Juan Capistrano and is classified as Activity Category B in terms of the NAC. A few times per year, the area nearest La Pata Avenue is used for special events such as equestrian events and soccer tournaments. The area is depressed below La Pata Avenue by between approximately 25 to 35 feet. There are no sound barriers near Area B.

Environmental Consequences

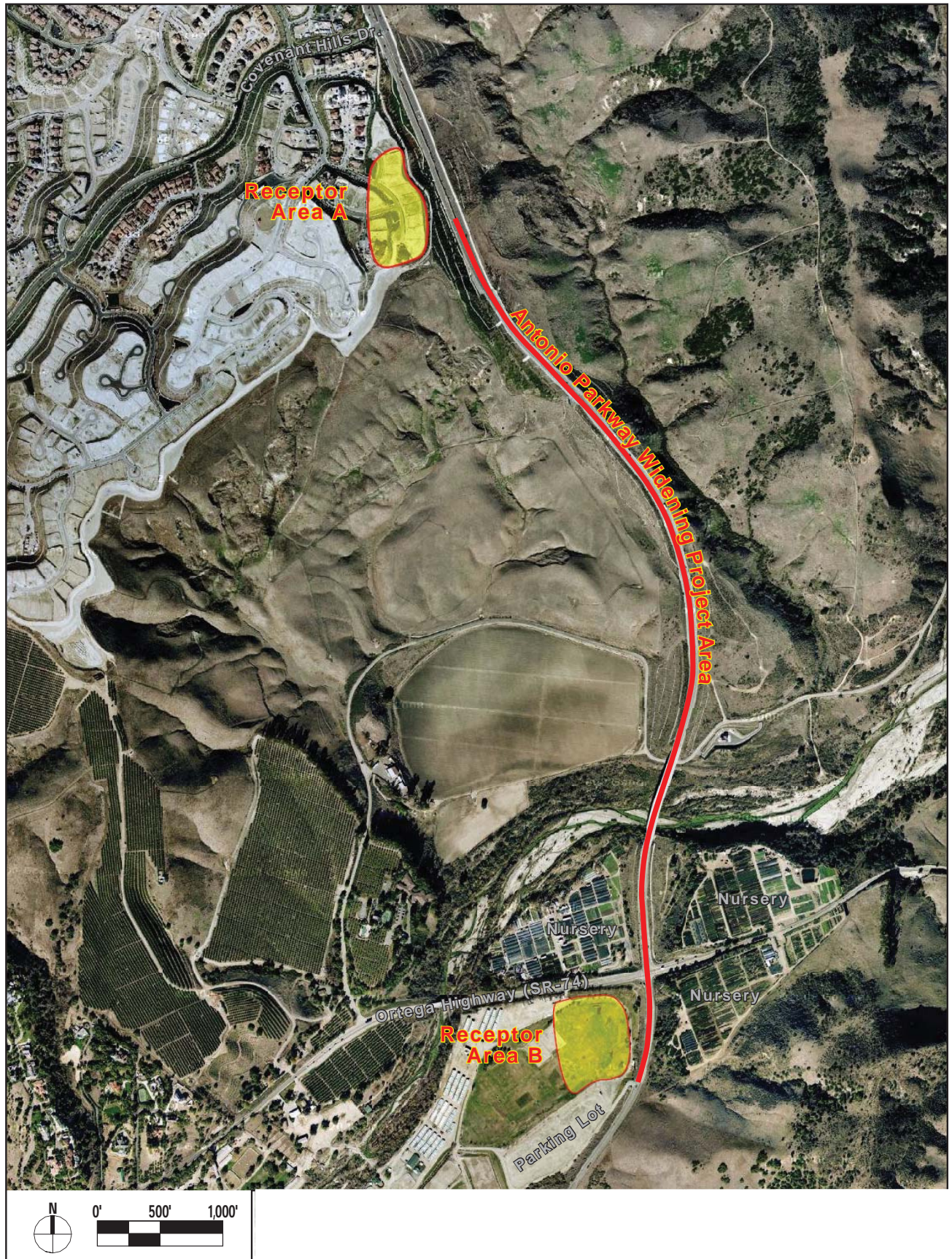
A field noise study was conducted in accordance with recommended procedures in Section N-3000 of Caltrans' *Technical Noise Supplement*. Short-term and long-term noise measurements were made to determine how traffic noise levels varied throughout the day and to calibrate the noise model. The existing noise levels at Areas A and B receivers are presented in the next section.

Build Alternative "Proposed Project" (Preferred Alternative)

Future Noise Environment, Impacts, and Considered Abatement

Traffic noise was modeled for each receptor area. Key inputs to the traffic noise model were the locations of roadways, shielding features, noise barriers, ground type, and receivers. Three-dimensional representations of these inputs were developed using CAD drawings, aerials, and topographic contours prepared for the project. Traffic noise levels were predicted using the FHWA Traffic Noise Model Version 2.5. Traffic noise was evaluated under existing conditions, design year no-project conditions, and design year with-project conditions. The modeling for future conditions was based on peak-hour traffic volumes and truck percentages under design year (2035) conditions taken from the traffic study prepared for the project.

Predicted design year traffic noise levels with the project are compared to existing conditions and to design year no-project conditions. The comparison to existing conditions is included in the analysis in order to identify traffic noise impacts under



Noise Receptor Areas

Figure 25

Antonio Parkway Widening



the substantial increase criterion. The comparison to no-project conditions indicates the direct effect of the project. The results of the detailed impact analysis performed at Receptor Areas A and B are presented below.

Receptor Area A Noise Impact Analysis

Figure 26 presents the receptor locations used to assess impacts for Receptor Area A. Noise levels were measured at receptors ST-1 and LT-1, and traffic noise from Antonio Parkway was modeled at both receptors. Table 17 presents the applicable NAC category and level for each receptor in addition to the existing, the future-without-project, and the future-with-project peak-hour noise levels. Noise level increases over existing conditions and over future no-project conditions are presented. Table 16 shows that receptors in Receptor Area A would not be impacted because the projected noise level is below the NAC of 67 A-weighted decibels (dBA), and the noise level increase due to the project is less than 12 dB. Therefore, noise abatement was not considered for Receptor Area A.

Table 17
Receptor Area A Impact Analysis

Receptor	Noise Abatement Criteria		Peak Noise Hour (dBA L _{eq} [h])			Increase Over Existing (dBA)	Increase Over No Build (dBA)	Impact Type
	Category	Level (dBA)	Existing	Future No Build	Future With Action			
ST-1	B	67	50	54	54	4	0	No Impact
LT-1	B	67	51	56	56	5	0	No Impact
dBA: A-weighted decibel(s); L _{eq} (h): sound energy equivalent noise level (one hour)								
Source: Mestre Greve Associates, December 2009								

Receptor Area B Noise Impact Analysis

Figure 27 presents the noise analysis receptor locations used to assess impacts for Receptor Area B. Traffic noise from La Pata Avenue and SR-74 was modeled at 11 receptors plus the location where the noise measurements were located to ensure that the measurement site, ST-2, was not receiving more noise reduction due to topographic effects than receivers located farther from the road.

Table 18 presents the applicable NAC category and level for each receptor in Receptor Area B along with the existing, the future without-project, and the future with-project peak-hour noise levels. Noise level increases over existing conditions and over future no-project conditions are presented. Table 18 shows that receptors in Receptor Area B would not be impacted because the projected noise level is below the NAC of 67 dBA, and the noise level increase due to the project is less than 12 dB. Therefore, noise abatement was not considered.

Table 18
Receptor Area B Impact Analysis

Receptor	Noise Abatement Criteria		Peak Noise Hour (dBA L _{eq} [h])			Increase Over Existing (dBA)	Increase Over No Build (dBA)	Impact Type
	Category	Level (dBA)	Existing	Future No Build	Future With Action			
ST-2	B	67	56	61	61	5	0	No Impact
ST-2a	B	67	55	61	61	6	0	No Impact
ST-2b	B	67	56	60	60	4	0	No Impact
ST-2c	B	67	55	59	59	4	0	No Impact
ST-2d	B	67	54	60	60	6	0	No Impact
ST-2e	B	67	53	58	58	5	0	No Impact
ST-2f	B	67	54	58	58	4	0	No Impact
ST-2g	B	67	55	58	58	3	0	No Impact
ST-2h	B	67	52	57	57	5	0	No Impact
ST-2i	B	67	52	57	57	5	0	No Impact
ST-2j	B	67	54	57	57	3	0	No Impact
ST-2k	B	67	55	58	58	3	0	No Impact
dBA: A-weighted decibel(s); L _{eq} (h): sound energy equivalent noise level (one hour)								
Source: Mestre Greve Associates, December 2010.								

Construction Noise

Construction noise represents a short-term increase over current ambient noise levels. Receivers that would be affected by traffic noise would be affected by construction noise as well. Typical construction equipment expected to be utilized during the construction of the project and their related noise levels are shown in Table 19.

Table 19
Construction Equipment Noise

Equipment	Maximum Noise Level (dBA at 50 feet)
Scrapers	85
Bulldozers	85
Heavy Trucks	84
Backhoe	80
Pneumatic Tools	85
Concrete Pump	82
Source: FHWA RCNM User's Guide, January 2006.	

The major sources of noise associated with project construction would include heavy grading equipment, pile driving for the bridge over San Juan Creek, and demolition of existing facilities to join with new construction. From the southern boundary of Ladera Ranch to the bridge across San Juan Creek, the grading for the full six-lane

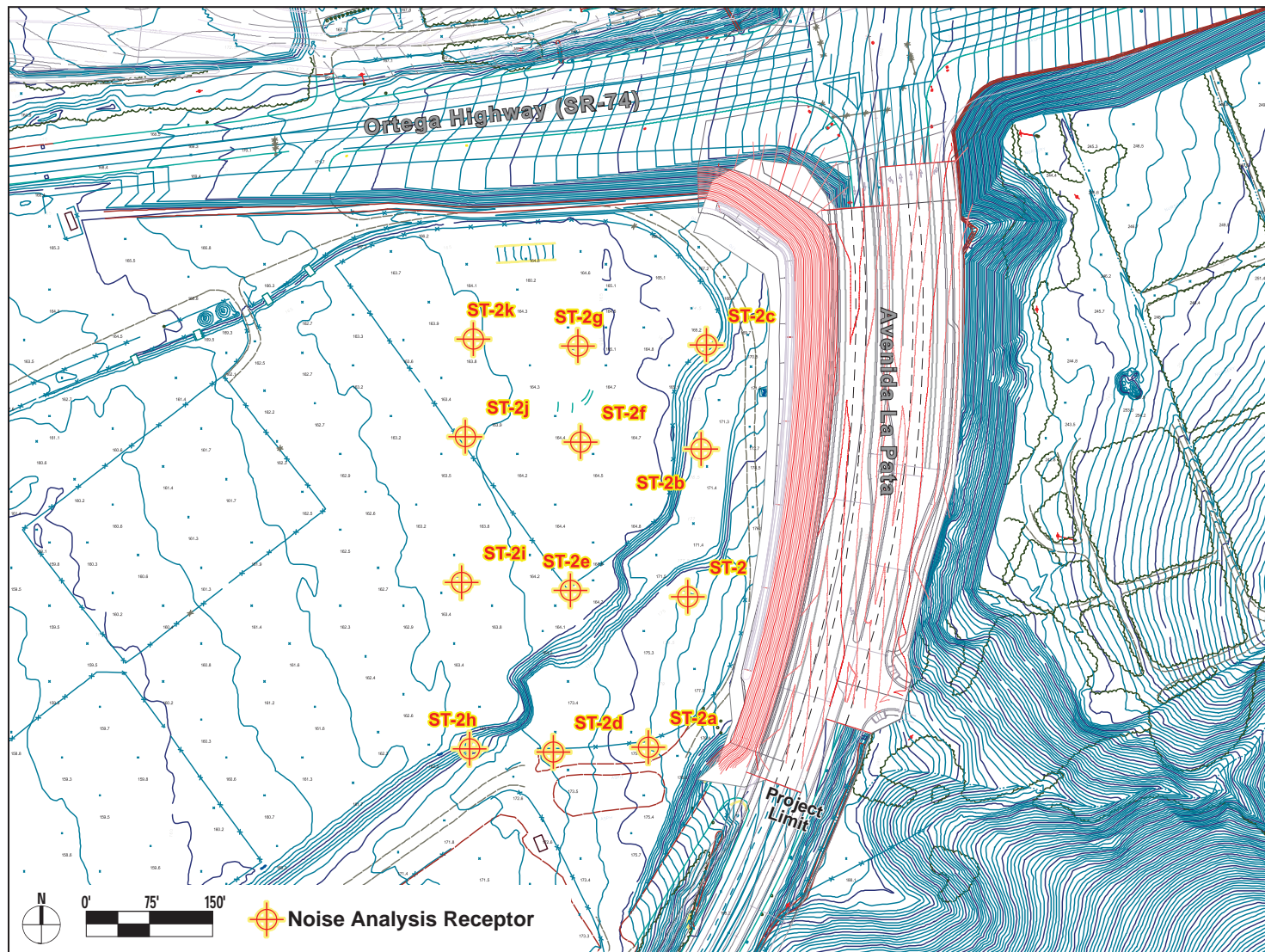


Noise Receptor Locations for Receptor Area A

Figure 26

Antonio Parkway Widening





Noise Receptor Locations for Receptor Area B

Antonio Parkway Widening

Figure 27

cross section was done in conjunction with the initial phase (four lanes) of Antonio Parkway. Through this portion of the study area, only minor grading would be required for the construction of the bridge abutments, the area south of the bridge, and the widening of La Pata Avenue south of SR-74.

The homes near the northern end of the project are located approximately 200 feet from the nearest grading point. Further, there is a barrier located at the edge of the residential pads that would reduce construction noise levels by approximately 10 dB. Grading equipment noise levels would not be expected to exceed 68 dBA at these homes, and average noise levels from grading would be expected to be in the 57-dBA to 63-dBA range. The equestrian center is directly adjacent to the area that would be graded along La Pata Avenue south of SR-74, and noise levels near construction would likely reach high levels during construction activity. However, given the temporary nature of the events held at the portion of the equestrian center near La Pata Avenue, it is unlikely construction noise would affect these activities. The equestrian center field closest to La Pata Avenue is only used a few times a year for special events such as equestrian competitions and soccer tournaments.

Demolition of existing facilities would likely require jackhammering, which could reach noise levels as high as 92 dBA at the nearest noise-sensitive receptor. However, the number of times jackhammering would occur concurrently with special events in the equestrian center field adjacent to the construction area is limited. Further, jackhammering typically occurs for a limited time in any one area, thereby minimizing potential impacts.

Pile driving would be required for the construction of the bridge across San Juan Creek. Pile driving is expected to occur over a 30- to 45-day period. The noise level resulting from a hammer drop at the nearest noise-sensitive receptor would not be expected to exceed 62 dBA.

The *County of Orange Municipal Code Noise Ordinance* (Title 4, Division 6) exempts construction noise from the noise limits defined in the ordinance as long as the construction noise occurs between the hours of 7:00 AM and 8:00 PM, Monday through Saturday, excluding federal holidays. Noise-generating activities associated with the project are not expected to occur outside of these hours. Therefore, construction would comply with the applicable local noise ordinance.

No Build (No Action) Alternative

Future year noise levels with the No Build Alternative would increase compared to existing conditions because traffic volumes are projected to increase (see Tables 17 and 18). However, the receptors in Receptor Area A or Receptor Area B would not be exposed to noise level above the NAC of 67 dBA, or a noise level increase of 12 dB or greater. In addition, with the No Build Alternative, there would be no construction noise. No impacts would result with the No Build Alternative.

Avoidance, Minimization, and/or Abatement Measures

Long-term Traffic Noise

The analysis presented above shows that no outdoor areas of frequent human use subject to the NAC are projected to be exposed to noise levels approaching or exceeding the NAC or to a substantial noise increase. Therefore, consideration of

noise abatement is not required. The final decision of the noise abatement will be made upon completion of the project design and the public involvement processes.

Short-term Construction Noise

No adverse noise impacts from construction are anticipated because construction activities would be conducted in accordance with Section 7-1.01I of Caltrans' Standard Specifications and with applicable local noise standards. Construction noise would be short-term and intermittent. Further, the County of Orange has adopted the standard conditions to minimize temporary construction-related noise impacts. The following minimization measures would apply:

- N-1 During construction all activities will comply with sound control measures outlined in Section 7-1.01I of the Caltrans' Standard Specifications.
- N-2 During construction, all noise generating activities be limited to the hours of 7 a.m. to 8 p.m. on weekdays and Saturdays. No noise generating activities shall occur on Sundays and holidays in accordance with the County of Orange *Noise Ordinance*.
- N-3 As part of the contract specifications, the contractor shall abide by the following conditions:
 - (1) All construction vehicles or equipment, fixed or mobile, operated within 1,000' of a dwelling shall be equipped with properly operating and maintained mufflers.
 - (2) All operations shall comply with Orange County Codified Ordinance Division 6 (Noise Control).
 - (3) Stockpiling and/or vehicle staging areas shall be located as far as practicable from dwellings. Notations on the front sheet of the project's grading plans, will be considered as adequate evidence of compliance with this condition.

BIOLOGICAL ENVIRONMENT

Natural Communities

This section of the document discusses natural communities of concern. The focus of this section is on biological communities, not individual plant or animal species. This section also includes information on wildlife corridors and habitat fragmentation. Wildlife corridors are areas of habitat used by wildlife for seasonal or daily migration. Habitat fragmentation involves the potential for dividing sensitive habitat and thereby lessening its biological value.

Habitat areas that have been designated as critical habitat under the Federal Endangered Species Act (FESA) are discussed below in the Threatened and Endangered Species section. Wetlands and other waters are also discussed below in the Wetlands and Other Waters section.

Affected Environment

Information contained within this section is summarized from the January 2010 *Antonio Parkway Natural Environment Study* (NES). The data provided in the NES were obtained from the Draft Natural Community Conservation Plan/Master Streambed Alteration Agreement/Habitat Conservation Plan (NCCP/MSAA/HCP) and Draft Joint Programmatic EIR/EIS that was published in July 2006. The initial vegetation map for this effort was compiled into a Geographic Information System (GIS) database by the County of Orange for the Southern Subregion NCCP/MSAA/HCP study area in 1993. In 2005, Glenn Lukos Associates (GLA) updated the database with remapping of the vegetation communities in the development planning areas of Rancho Mission Viejo (RMV).

The following vegetation communities occur on the project site: coastal sage scrub, annual grassland, riparian, and oak forest. Agriculture and developed areas also occur on the project site. Effects on these vegetation communities and landcover types are discussed below.

Environmental Consequences

Build Alternative "Proposed Project" (Preferred Alternative)

The proposed project would impact a total of 61.6 acres (42.7 acres permanent and 18.9 acres temporary) of vegetation communities and other landcover types. The habitat types and acreages are provided in Table 20 and depicted in Figure 28. Individual impacts on each of these areas are discussed below.

These impacts were previously analyzed in conjunction with prior projects that were reviewed under CEQA and NEPA and authorized by the resource agencies, in accordance with federally and/or State-regulated biological resources, including listed species and wetlands.

Table 20
Summary of Impacts (acres) to Vegetation Communities and Landcovers Associated With the Antonio Parkway Widening Project in Relation to Southern Subregion NCCP/MSAA/HCP Impact Analysis

Vegetation Communities and Land Covers	Antonio Parkway Widening Project Total Impact Area ^a		Previously Analyzed Impacts								Residual Impacts in Habitat Reserve ^f	
			Within Planning Area 1		Temporary Bridge Impacts	Permanent Impacts Within Cow Camp Road Alignment ^b	Within Other Infrastructure Impacts ^c		Permanent Impacts Within La Pata Evaluation Area ^d	Permanent Impacts Previously Analyzed in Antonio 4(d) ^e		
	Perm.	Temp.	Perm.	Temp.			Perm.	Temp.				
Conserved Vegetation Communities												
Sage Scrub	6.7	2.9	2.8	0.9	0.4	2.8	1.2	0.8	0.0	5.0	-5.1	0.2
Grassland	8.0	6.4	6.1	5.2	0.2	0.0	0.0	0.1	0.1	1.7	0.1	0.4
Riparian	0.0	2.7	0.0	0.0	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Oak Forest	0.0	0.2	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Subtotal	14.7	12.2	8.9	6.3	3.3	2.8	1.2	1.0	0.1	6.7	-5.0	0.6
Non-Conserved Vegetation Communities and Land Covers												
Agriculture	14.1	6.0	10.9	3.8	0.0	1.0	0.7	0.5	0.0	2.3	-0.8	0.6
Developed	13.9	0.7	7.6	0.1	0.4	0.6	0.3	1.0	0.1	6.2	-0.9	-0.9
Subtotal	28.0	6.7	18.5	3.9	0.4	1.6	1.0	1.5	0.1	8.5	-1.7	-0.3
Total	42.7	18.9	27.4	10.2	3.7	4.4	2.2	2.5	0.2	15.2	-6.7	0.3

Perm.: Permanent; Temp.: Temporary

^a Includes entire project area. Permanent impacts include areas within grading limits and temporary impact areas include bridge, remedial grading areas, and temporary construction easements (see Figure 28).

^b Cow Camp Road grading limits were analyzed as permanent impacts in the Southern Subregion NCCP/MSAA/HCP.

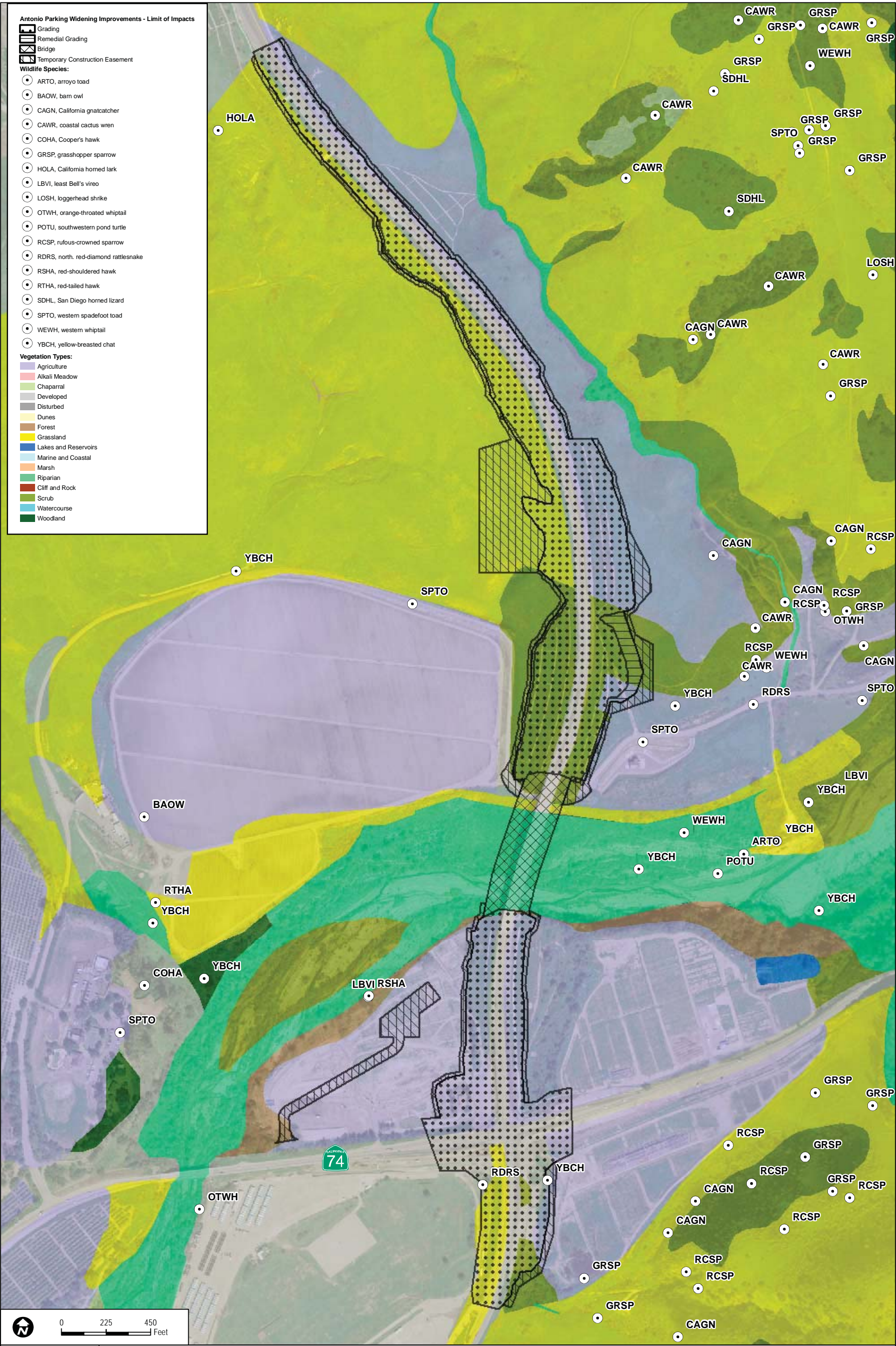
^c Other infrastructure includes permanent and temporary impacts associated with the existing RMV water system, new water and sewer, proposed trails, and PA 1 infrastructure. These impacts were previously analyzed separately in the Southern Subregion NCCP/MSAA/HCP so the acreages represent the cumulative total of infrastructure impacts.

^d The La Pata Evaluation Area was analyzed in the Southern Subregion NCCP/MSAA/HCP as part of the extension of La Pata.

^e The Antonio 4(d) area depicts areas that were previously analyzed in the habitat loss assessment for the entitlement of Ladera Ranch and construction of the existing Antonio Parkway, thus indicating the limits of previously analyzed impacts.

^f The residual impacts in the Habitat Reserve represent any potential additional impacts in the Habitat Reserve that were not specifically analyzed in the Southern Subregion NCCP/MSAA/HCP due to any changes in the project footprint. Negative permanent residuals may occur if total permanent impacts in the project area previously analyzed exceed the permanent impacts of the proposed project.

Source: Dudek January 2010.



Vegetation Communities with the Project Area

Antonio Parkway Widening

Figure 28

Coastal Sage Scrub: Coastal sage scrub supports a rich diversity of wildlife species, with some species restricted almost exclusively to this vegetation community. Coastal sage scrub was the focus of the initial NCCP planning efforts and is a Conserved Vegetation Community in the Draft Southern Subregion NCCP/MSAA/HCP. The proposed project would affect 9.6 acres (6.7 acres permanent, 2.9 acres temporary) of coastal sage scrub. This level of impact is generally less than the regional planning efforts, which accounted for effects on 13.9 acres (11.8 acres permanent, 2.1 acres temporary). The proposed project would result in an increase of 0.2 acre of temporary impact over what was previously analyzed; however, there would be a reduction of 5.1 acres of permanent impacts. The mitigation program adopted as part of the regional planning programs was based on the larger impact acreage. Therefore, proposed project effects would be considered less than substantial.

Annual Grassland: Grasslands provide foraging opportunities for many native wildlife species, especially raptors. Grassland is a Conserved Vegetation Community in the Draft Southern Subregion NCCP/MSAA/HCP. The proposed project would affect 14.4 acres (8.0 acres permanent, 6.4 acres temporary) of annual grassland. This level of impact is generally consistent with the regional planning efforts, which accounted for effects on 13.4 acres (8.1 acres permanent, 5.5 acres temporary). The proposed project would affect 0.5 acre (0.1 acre permanent, 0.4 acre temporary) of annual grassland that has not been previously analyzed. This limited additional loss of annual grassland habitat would be along an existing road and would not increase habitat fragmentation or substantially reduce the grassland habitat value for wildlife. Therefore, proposed project effects would be considered less than substantial.

Riparian: Riparian habitats are biologically productive and diverse, and they are the exclusive habitat of several Threatened or Endangered wildlife species and many other special-status plant and wildlife species. The riparian community is a Conserved Vegetation Community in the Draft Southern Subregion NCCP/MSAA/HCP and was also addressed in the U.S. Army Corps of Engineers' *San Juan Creek and Western San Mateo Creek Watersheds Special Area Management Plan* (SAMP) pursuant to Section 404 of the Clean Water Act. The proposed project would affect 2.7 acres (0.0 acre permanent, 2.7 acres temporary) of riparian vegetation. The previous regional planning efforts accounted for effects on 2.7 acres (0.0 acre permanent, 2.7 acres temporary). The proposed project effects would be entirely within previously analyzed areas for which mitigation has already been provided. Therefore, proposed project effects would be considered less than substantial.

Oak Forest: Oak forests are an important resource in California that provides aesthetic, cultural, economic, and environmental value in addition to wildlife habitat. Oak forest is a Conserved Vegetation Community in the Draft Southern Subregion NCCP/MSAA/HCP. The proposed project would affect 0.2 acre (0.0 acre permanent, 0.2 acre temporary) of oak forest. The previous regional planning efforts accounted for effects on 0.2 acre (0.0 acre permanent, 0.2 acre temporary). The proposed project effects would be entirely within previously analyzed areas for which mitigation has already been provided. Therefore, proposed project effects would be considered less than substantial.

Agriculture: Agricultural areas provide foraging opportunities for some native wildlife species, especially raptors. The proposed project would affect 20.1 acres (14.1 acres

permanent, 6.0 acres temporary) of land designated as agriculture⁴. This level of impact is consistent with the regional planning efforts, which account for effects on 19.2 acres (14.9 acres permanent, 4.3 acres temporary). The proposed project would affect a net of 0.9 acre (-0.8 acre permanent, 1.7 acres temporary) of agricultural land that has not been previously analyzed. This limited additional temporary loss of agricultural habitat would be along an existing road and would not increase habitat fragmentation or substantially reduce the agricultural habitat value for wildlife. Therefore, proposed project effects would be considered less than substantial.

Developed: These areas include urban areas, roads (including the existing Antonio Parkway/ La Pata Avenue and SR-74), non-natural parks, and cleared and graded areas. Effects on developed areas would not affect biological resources. The proposed project would affect 14.6 acres (13.9 acres permanent, 0.7 acre temporary) of developed areas. The previous documentation prepared for the regional planning efforts accounted for effects on 16.3 acres (14.8 acres permanent, 1.5 acres temporary). The proposed project would affect a net 1.7 acres less (-0.9 acre permanent, -0.8 acre temporary) of previously analyzed developed areas. Proposed project effects on developed land would be considered less than substantial.

Wildlife Movement and Habitat Fragmentation: The proposed project consists of the widening of an existing road. Therefore, the proposed project would not substantially change movement patterns or increase habitat fragmentation on the project site. Use of San Juan Creek as a wildlife movement corridor would not be adversely affected because the project would bridge the creek in the same manner as existing conditions.

Noise Impacts: Noise impacts resulting from traffic are currently present on the project site due to existing traffic on Antonio Parkway. During construction of the proposed project, noise levels may incrementally increase; however, this increase is not expected to impact wildlife because resident animals are already somewhat acclimated to noise levels associated with traffic along Antonio Parkway, especially since construction is already occurring for the widening of SR-74 in this area. In addition, noise impacts resulting from construction would be relatively short-term.

Following project implementation, noise levels would incrementally increase over present levels due to increased traffic capacity. However, given the existing noise on Antonio Parkway, the project is not expected to result in wildlife displacement due to increased traffic noise disturbance.

Dust and Urban Pollutants: Limited grading would be required for the proposed project. Therefore, activities that disturb soils and result in the accumulation of dust on the surface of the leaves of plant species are expected to be minimal to moderate.

Improper disposal of petroleum and chemical products from construction equipment could impact water quality of runoff from construction. Urban runoff from project

⁴ The landcover category of "agriculture" includes a variety of uses. The agriculture in the study area with this designation is predominately grazing land and would not represent Important Farmland pursuant to the California Department of Conservation Farmland Mapping.

infrastructure could also impact water quality of runoff adjacent to the roadway during operation of the proposed project. Adverse effects on water quality could impact populations of plant and wildlife species that occur in the immediate vicinity of the runoff. This would be considered potentially substantial because many special-status biological resources are present along San Juan Creek. However, standard BMPs would be followed to comply with storm water permits; therefore, proposed project effects are expected to be less than substantial.

Southern Subregion Natural Community Conservation Plan/Master Streambed Alteration Agreement/Habitat Conservation Plan

The County of Orange, Rancho Mission Viejo, and the Santa Margarita Water District (SMWD), in conjunction with State and federal resource agencies, have prepared the Southern Subregion NCCP/MSAA/HCP. The proposed Conservation Strategy of the plan “focuses on long-term protection and management of multiple natural communities that provide habitat essential to the survival of a broad array of wildlife and plant species” (County of Orange 2006). The NCCP/MSAA/HCP creates a permanent habitat reserve consisting of 11,950 County of Orange-owned acres contained within 3 existing County regional and wilderness parks (O’Neill Regional Park, Riley Wilderness Park, and Caspers Wilderness Park), and 20,868 acres owned by Rancho Mission Viejo.

The U.S. Fish and Wildlife Service (USFWS) issued a FESA Section 10(a)(1)(B) Incidental Take Permit (ITP) for federally listed species in January 2007 for the HCP component of the Draft Southern Subregion NCCP/MSAA/HCP. The Southern HCP, as the federal component of the NCCP/MSAA/HCP, is the federally approved HCP for which the Section 10(a)(1)(B) ITP was issued. The proposed project impacts reported in this Environmental Assessment (EA) are based on the analysis reported in the Draft Southern Subregion NCCP/MSAA/HCP and which was incorporated into the Southern HCP. Therefore, all impacts authorized by the Southern HCP ITP are the same as those reported in the Draft Southern Subregion NCCP/MSAA/HCP, and these documents are functionally the same for this purpose.

No Build (No Action) Alternative

The No Build Alternative would not result in any direct impacts on natural communities.

Avoidance, Minimization, and/or Mitigation Measures

The primary mitigation for project impacts is the preservation, monitoring, and management of the Southern Subregion Habitat Reserve, as described in detail in Chapter 7 of the Draft Southern HCP. An additional requirement of the Southern HCP, as described in Appendix U (Avoidance and Minimization Measures) is the preparation of a Biological Resources Construction Plan (BRCP) designed to protect biological resources during construction. The BRCP will contain at minimum the following:

- Specific measures for the protection of sensitive amphibian, mammal, bird, and plant species during construction;
- Identification and quantification of habitats to be removed;

- Design of protective fencing around conserved habitat areas and the construction staging areas;
- Specific construction monitoring programs for sensitive species required by Wildlife Agencies including, but not limited to, programs for the arroyo toad, western spadefoot, southwestern pond turtle, cactus wren, and coastal California gnatcatcher, consistent with prior Section 7 consultations and *Fish and Game Code* Section 1600 agreements (e.g., Arroyo Trabuco Golf Course); and
- Specific measures required by Wildlife Agencies for the protection of sensitive habitats including, but not limited to, erosion and siltation control measures, protective fencing guidelines, dust control measures, grading techniques, construction area limits, and biological monitoring requirements.

Appendix U also requires the restoration of all temporary impact areas to equivalent or better conditions compared to the existing condition at the time of impact. Further measures to minimize impacts to biological resources are set forth in the regulatory agency permits issued for the project.

B-1 Prior to the initiation of construction, the County of Orange shall approve a Biological Resources Construction Plan (BRCP) consistent with the requirements of Appendix U of the Southern HCP.

Wetlands and Other Waters

Regulatory Setting

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the Clean Water Act (33 U.S.C. 1344) is the primary law regulating wetlands and waters. The Clean Water Act regulates the discharge of dredged or fill material into waters of the United States, including wetlands. Waters of the United States include navigable waters, interstate waters, territorial seas and other waters that may be used in interstate or foreign commerce. To classify wetlands for the purposes of the Clean Water Act, a three-parameter approach is used that includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils subject to saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the Clean Water Act.

Section 404 of the Clean Water Act establishes a regulatory program that provides that no discharge of dredged or fill material can be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation's waters would be significantly degraded. The Section 404 permit program is run by the U.S. Army Corps of Engineers (ACOE) with oversight by the Environmental Protection Agency (EPA).

The Executive Order for the Protection of Wetlands (E.O. 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, this executive order states that a federal agency, such as FHWA, cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds: 1) that there is no practicable alternative to the construction and 2) the proposed project includes all practicable measures to minimize harm.

Affected Environment

Information contained within this section is summarized from the November 2009 NES and information from Glenn Lukos Associates. A project-level jurisdictional wetland delineation for the proposed development planning areas was conducted starting in 2002.

The study area includes riparian vegetation and areas under the jurisdiction of federal and State regulatory agencies. Riparian vegetation is generally considered high quality because it provides habitat for many native plant and wildlife species.

ACOE Jurisdiction

Antonio Parkway crosses San Juan Creek immediately north of Ortega Highway. In the vicinity of the proposed bridge improvements, San Juan Creek is approximately 480 feet wide and includes low-flow channels lined by wetland and riparian vegetation alternating with adjacent terraces that are largely unvegetated or sparsely vegetated with upland forbs and subshrubs. Wetland areas are dominated by southern cattail (*Typha domingensis*, OBL), white watercress (*Rorippa nasturtium-aquaticum*, OBL), arroyo willow (*Salix lasiolepis*, FACW), black willow (*Salix gooddingii*, OBL), and mulefat (*Baccharis salicifolia*, FACW).⁵ The lower non-wetland terraces exhibit an Ordinary High Water Mark (OHWM) characterized by the presence of litter and debris (debris wrack), shelving and terracing, and destruction of terrestrial vegetation. Where the terraces exhibit vegetation, it is sparse and includes shrubs adapted to periodic high-energy flows such as scalebroom (*Lepidospartum squamatum*) and mulefat.

CDFG Jurisdiction

At the existing Antonio Parkway Bridge crossing, CDFG jurisdiction closely mirrors ACOE jurisdiction and consists of alternating channels and terraces vegetated with a mosaic of the herbaceous and woody species described above.

Functions and Values

The San Juan Creek watershed is largely undeveloped, and the creek exhibits high levels of hydrologic, biogeochemical, and habitat functions as evidenced by the presence of a number of listed or otherwise special-status animals such as the arroyo toad (*Anaxyrus californicus*), least Bell's vireo (*Vireo belli pusillus*), yellow warbler (*Dendroica petechia*), and yellow-breasted chat (*Icteria virens*).

⁵ OBL: obligate wetland – Plants that occur almost always (estimated to be 99 percent) in wetlands under natural conditions, but which may also occur rarely (estimated to be 1 percent) in non-wetlands (i.e., cattails or common water hyacinth). FACW: Facultative Wetlands – Plants that occur usually (estimated 67 percent to 99 percent) in wetlands, but also occur (estimated 1 percent to 33 percent) in non-wetlands (i.e., mule fat or willow).

Environmental Consequences

Build Alternative “Proposed Project” (Preferred Alternative)

Impacts on riparian vegetation types have been minimized to the extent practicable. The bridge over San Juan Creek spans the creek bed. With the exception of two pilings that account for 0.006 acre of permanent impact to non-wetland waters, impacts to ACOE jurisdiction would be temporary construction impacts; all areas subject to temporary impacts would be restored to pre-project conditions following the completion of construction. Temporary impacts would total 2.53 acres, of which 0.18 acre consists of jurisdictional wetlands. There would be no measurable permanent loss of function to “Waters of the U.S.” associated with the widening of the existing Antonio Parkway Bridge.

Because permanent impacts are limited to the footprint of the pilings (0.006 acre), there would be no measurable permanent impact on wetland or other aquatic functions. The temporary removal of wetland and/or riparian vegetation would result in the temporary loss of habitat functions provided by the habitat to be removed for construction purposes. The lost functions include loss of breeding and foraging habitat for common and special status avifauna. These temporary impacts would not have a measurable impact on either common or special status avifauna within the San Juan Creek watershed due to the substantial amount of habitat both upstream and downstream of the project site as well as in numerous tributaries. With implementation of the project mitigation (i.e., replacement of all habitat removed for purposes of construction), all temporary impacts would be fully mitigated.

As for habitat functions, there would be no permanent impacts to biogeochemical (water quality) or hydrologic functions associated with project construction. Potential temporary impacts to biogeochemical or hydrologic functions associated with construction would be minimized and mitigated through the installation and maintenance of a variety of BMPs during construction.

Permanent impacts associated with the two bridge pilings located within CDFG jurisdiction would total 0.006 acre, of which 0.003 acre consists of riparian habitat and 0.003 acre is unvegetated channel. Temporary impacts to CDFG jurisdiction would total 2.54 acres, of which 1.43 acres are unvegetated streambed and 1.11 acres are vegetated riparian habitat. As noted above, relative to ACOE jurisdiction, there would be no measurable permanent loss of function to “Waters of the State” associated with the widening of the existing Antonio Parkway Bridge.

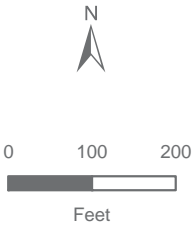
Tables 21 and 22 show the amount of ACOE and CDFG jurisdictional waters within the project study area and the amount that would be affected by the proposed project. The ACOE and CDFG jurisdiction are also depicted in Figures 29 and 30, respectively.

Corps Permanent Impacts	Acres
Non-Wetland	0.006
Wetland	0
Total Permanent Impacts	0.006
Corps Temporary Impacts	Acres
Non-Wetland	2.35
Wetland	0.18
Total Temporary Impacts	2.53



Legend

- Permanent Road Impacts
- Temporary Road Impacts
- CORPS NON-WETLAND
- CORPS WETLAND



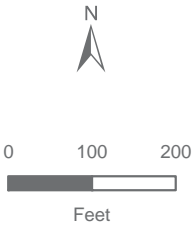
CDFG Permanent Impacts	Acres
Unvegetated	0.003
Riparian	0.003
Total Permanent Impacts	0.006

CDFG Temporary Impacts	Acres
Unvegetated	1.43
Riparian	1.11
Total Temporary Impacts	2.54



Legend

- Permanent Road Impacts
- Temporary Road Impacts
- Unvegetated Streambed
- Riparian



CDFG Jurisdictional Waters

Antonio Parkway Widening

Figure 30

Table 21
Army Corps of Engineers Jurisdictional Waters of the U.S.
(San Juan Creek)

	Non-Wetland (acres)	Wetland (acres)	Total Impacts (acres)
ACOE Permanent Impacts	0.006	0	0.006
ACOE Temporary Impacts	2.35	0.18	2.53
Source: GLA January 2010.			

Table 22
California Department of Fish and Game Jurisdictional Waters
(San Juan Creek)

	Unvegetated (acres)	Riparian (acres)	Total Impacts (acres)
CDFG Permanent Impacts	0.003	0.003	0.006
CDFG Temporary Impacts	1.43	1.11	2.54
Source: GLA January 2010.			

Water and wetland permits are needed due to the impacts on land within the jurisdiction of the ACOE and CDFG. Specifically, a Section 404 Permit is needed from the ACOE and a 1602 Agreement for Streambed Alteration is required from the CDFG. In addition, a Water Quality Certification and Waste Discharge Permit would be required from the California Water Resources Control Board—San Diego Region (SDRWQCB).

The Antonio Parkway Widening Project has been assumed in regional planning programs designed to address the biological resources on a subregional level. Through the development of these subregional planning programs, there was a multi-year coordination program with the County of Orange, the ACOE, the USFWS, the CDFG, and the SDRWQCB.

The *San Juan Creek and Western San Mateo Creek Watersheds Special Area Management Plan* (SAMP) was developed by the ACOE to address water and wetland issues on a watershed level to ensure protection and long-term management of sensitive aquatic resources (biological and hydrological). The SAMP and the associated agency coordination process are discussed in more detail in Chapter 3.

Permitting for the widening of Antonio Parkway was done in conjunction with the Ranch Plan Planned Community's Planning Area 1 improvements (also known as the Ortega Gateway Project, which includes residential and urban activity center, as well as improvements to Antonio Parkway and SR-74). Therefore, the roadway project is covered by the following agency permits issued for Planning Area 1:

- ACOE issued an individual Section 404 permit (permit number 200602159);
- CDFG issued a Streambed Alteration Agreement (Notification No. 1600-2006-0178-R5); and

- SDRWQCB issued Waste Discharge permit WDID No. 9 000001486 and Section 401 Water Quality Certification No 06C-047.

Copies of these permits are included in the Natural Environment Study.

No Build (No Action) Alternative

The No Build Alternative would not result in any direct impacts on wetlands and other waters.

Avoidance, Minimization, and/or Mitigation Measures

A U.S. Army Corps of Engineers Section 404 Permit (200602159-YJC), a Regional Water Quality Control Board Section 401 Water Quality Certification (No. 06C-047) and Waste Discharge Requirements (WDID No. 9000001486), and a California Department of Fish and Game Section 1602 Streambed Alteration Agreement (1600-2006-0178-R5) have been issued for the proposed project. Further measures to minimize impacts to biological resources are set forth in the regulatory agency permits issued for the project. Permanent impacts will be mitigated through application of credits within the Gobernadora Ecological Restoration Area (GERA). Temporary impacts will be mitigated through revegetation at the project site.

Wetlands Only Practicable Finding

The Executive Order for the Protection of Wetlands (EO 11990) requires that, prior to construction in wetlands, findings be made that: (1) there is no practicable alternative to the construction and (2) the proposed project includes all practicable measures to minimize harm. The Department, acting as the federal lead agency, has considered the information provided in this environmental document and, through coordination with the ACOE, which has jurisdiction over wetlands habitat, has determined that there is no other practicable alternative that would reduce impacts to wetlands.

Total avoidance of the wetland areas is not possible because San Juan Creek traverses the area in an east-west direction and the Antonio Parkway Bridge crosses the creek in a north-south direction. Temporary impacts are associated with the two bridge pilings; however, there is no fill in the wetlands due to embankments. The impacts to the creek are associated with bridge support columns, not fill. There would be no measurable permanent loss of function to "Waters of the U.S." associated with the widening of the existing Antonio Parkway Bridge.

Equipment staging locations and construction methods are designed to avoid the wetlands area to the maximum extent possible.

A permit in compliance with Section 404 of the Federal Clean Water Act has been received from the ACOE (permit number 200602159). In issuing such a permit, the ACOE found that the project has incorporated (and will implement) all identified measures to avoid and/or minimize impacts to these resources.

Based on the above considerations, it is determined that there is no practicable alternative to the proposed construction in wetlands and that the preferred alternative includes all practicable measures to minimize harm to wetlands that may result from such use.

Plant Species

Regulatory Setting

The U.S. Fish and Wildlife Service (USFWS) is responsible for the protection of federally listed special-status plant species. "Special-status" species are selected for protection because they are rare and/or subject to population and habitat declines. "Special-status" is a general term for species that are afforded varying levels of regulatory protection. The highest level of protection is given to species that are formally listed or proposed for listing as endangered or threatened under the Federal Endangered Species Act (FESA). Please see the Threatened and Endangered Species section in this document for detailed information regarding these species.

This section of the document discusses all federally protected special-status plant species, including USFWS candidate species.

The regulatory requirements for FESA can be found at United States Code 16 (USC), Section 1531, et. seq. See also 50 CFR Part 402.

Affected Environment

Information contained within this section is summarized from the November 2009 NES. The information was taken from the database for special-status plant species in the NCCP/MSAA/HCP study area, which was compiled from the cumulative results of more than 25 general and focused biological survey efforts conducted between approximately 1990 and 2004 and from existing databases. Focused surveys throughout the Southern NCCP/MSAA/HCP study area, including the Antonio Parkway Widening Project area, were conducted for the federally listed Threatened and State-listed Endangered thread-leaved brodiaea (*Brodiaea filifolia*). The various survey efforts have resulted in a cumulative database that provides a strong portrayal of the abundance, richness, and distribution of biological resources in the project area.

Twenty-four special-status plant species (including one federally-listed Threatened and State Endangered species, which is discussed in the Threatened and Endangered Species Section below) are known to occur in the Southern Subregion and were evaluated in the NCCP/MSAA/HCP. No special-status plant species were observed in the project vicinity during rare plant surveys conducted for the NCCP/MSAA/HCP. Therefore, no special-status plant species are expected to occur on the project site.

Environmental Consequences

Build Alternative "Proposed Project" (Preferred Alternative)

No special-status plant species are expected to occur on the project site; therefore, there would be no effect on special-status plant species.

No Build (No Action) Alternative

The No Build Alternative would not result in any direct impacts on plant species.

Avoidance, Minimization, and/or Mitigation Measures

No special-status plant species are expected to occur on the project site. Therefore, no avoidance, minimization, or mitigation measures would be required.

Animal Species

Regulatory Setting

Many federal laws regulate impacts on wildlife. The U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NOAA Fisheries) are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with wildlife not listed or proposed for listing under the federal Endangered Species Act. Species listed or proposed for listing are discussed in the Threatened or Endangered Species section below. All other federally protected special-status animal species are discussed here, including USFWS or NOAA Fisheries candidate species.

Federal laws and regulations pertaining to wildlife include the following:

- National Environmental Policy Act
- Migratory Bird Treaty Act
- Fish and Wildlife Coordination Act

Affected Environment

Information contained within this section is summarized from the November 2009 NES. The NES used the database for special-status wildlife species in the NCCP/MSAA/HCP study area, which was compiled from the cumulative results of more than 25 general and focused biological survey efforts conducted between approximately 1990 and 2004 and from existing databases. Focused surveys were conducted throughout the Southern Subregion NCCP/MSAA/HCP study area, which includes the Antonio Parkway Widening Project area. These various survey efforts have resulted in a cumulative database that provides a strong portrayal of the abundance, richness, and distribution of biological resources in the project area.

Seventy-four special-status wildlife species (including 11 federally-listed Threatened or Endangered wildlife species discussed in the Threatened and Endangered Species section below) are known or have potential to occur in the Southern Subregion (e.g., steelhead, red-legged frog, pacific pocket mouse, and quino have or had potential to occur but are not expected to occur at present) and were evaluated in the NES. Of these, 57 wildlife species or their habitat(s) have potential to occur on the project site or within the project vicinity; 8 are not considered to have special-status (i.e., they are not on the CDFG's *Special Animals List*). Forty-nine wildlife species with special-status have very low to high potential to occur in the project impact area. This information is summarized in Table 23.

Table 23
Special-Status Wildlife Species With
Potential to Occur in the Project Impact Area

Common Name	Scientific Name	Status		Species P/A or Habitat Present (HP)	Potential to Occur in Project Impact Area
		USFWS	CDFG		
Birds					
Barn Owl ¹	<i>Tyto alba</i>	-	-	HP	moderate
Bell's sage sparrow	<i>Amphispiza belli belli</i>	-	WL	HP	low
Bewick's wren ¹	<i>Thyromanes bewickii</i>	-	-	HP	high
burrowing owl	<i>Athene cunicularia</i>	-	SSC	HP	low (nesting); moderate (wintering)
coastal cactus wren	<i>Campylorhynchus brunneicapillus couesi</i>	-	SSC	HP	low
California gull	<i>Larus californicus</i>	-	WL ²	HP	low
California horned lark	<i>Eremophila alpestris actia</i>	-	WL	HP	moderate
California thrasher ¹	<i>Toxostoma redividum</i>	-	-	HP	low
Cooper's hawk	<i>Accipiter cooperi</i>	-	WL	HP	moderate
Ferruginous hawk	<i>Buteo regalis</i>	-	WL	HP	moderate (foraging)
golden eagle	<i>Aquila chrysaetos</i>	-	FP;WL	HP	low (foraging)
grasshopper sparrow	<i>Ammodramus savannarum</i>	-	SSC	HP	moderate
lark sparrow ¹	<i>Chondestes grammacus</i>	-	-	HP	low
Lawrence's goldfinch ¹	<i>Carduelis lawrencei</i>	-	-	HP	moderate
loggerhead shrike	<i>Lanius ludovicianus</i>	-	SSC	HP	moderate
long-eared owl	<i>Asio otus</i>	-	SSC	HP	low
merlin	<i>Falco columbarius</i>	-	WL	HP	moderate (foraging only)
northern harrier	<i>Circus cyaneus</i>	-	SSC ³	HP	moderate (foraging only)
Pacific slope flycatcher ¹	<i>Empidonax difficilis</i>	-	-	HP	low
red-breasted sapsucker	<i>Sphyrapicus ruber</i>	-	SA ²	HP	low
red-shouldered hawk ¹	<i>Buteo lineatus</i>	-	-	HP	moderate
Southern California rufous-crowned sparrow	<i>Aimophila ruficeps canescens</i>	-	WL	HP	low
sharp-shinned hawk	<i>Accipiter striatus</i>	-	WL ²	HP	moderate (foraging only)
short-eared owl	<i>Asio flammeus</i>	-	SSC	HP	low
Swainson's hawk	<i>Buteo swainsoni</i>	-	ST ²	HP	very low
tricolored blackbird	<i>Agelaius tricolor</i>	-	SSC ⁴	HP	moderate (foraging only)
white-tailed kite	<i>Elanus leucurus</i>	-	FP	HP	moderate
yellow-breasted chat	<i>Icteria virens</i>	-	SSC	HP	low
yellow warbler	<i>Dendroica petechia</i>	-	SSC ⁵	P	5,125

Table 23
Special-Status Wildlife Species With
Potential to Occur in the Project Impact Area
(Continued)

Common Name	Scientific Name	Status		Species P/A or Habitat Present (HP)	Potential to Occur in Project Impact Area
		USFWS	CDFG		
Amphibians					
coast range newt	<i>Taricha torosa torosa</i>	-	SSC	HP	low
western spadefoot	<i>Scaphiopus hammondii</i>	-	SSC	HP	moderate
Reptiles					
California glossy snake ¹	<i>Arizona elegans occidentalis</i>	-	-	HP	moderate
coast patch-nosed snake	<i>Salvadora hexalepis virgultea</i>	-	SSC	HP	moderate
coastal western whiptail	<i>Aspidoscelis tigris stejnegeri</i>	-	SA	HP	moderate
Coronado skink	<i>Eumeces skiltonianus interparietalis</i>	-	SSC	HP	low
northern red-diamond rattlesnake	<i>Crotalus ruber ruber</i>	-	SSC	P	
orange-throated whiptail	<i>Aspidoscelis hyperythra (beldingi)</i>	-	SSC	HP	moderate
rosy boa	<i>Charina trivirgata</i>	-	SA	HP	low
San Diego banded gecko	<i>Coleonyx variegatus abbotti</i>	-	SA	HP	low
coast (San Diego) horned lizard	<i>Phrynosoma coronatum (blainvillei population)</i>	-	SSC	HP	moderate
San Diego ringneck snake	<i>Diadophis punctatus similis</i>	-	SA	HP	moderate
silvery legless lizard	<i>Anniella pulchra pulchra</i>	-	SSC	HP	moderate
southwestern pond turtle	<i>Actinemys marmorata pallid</i>	-	SSC	HP	moderate
two-striped garter snake	<i>Thamnophis hammondii</i>	-	SSC	HP	moderate
Mammals					
California leaf-nosed bat	<i>Macrotus californicus</i>	-	SSC	HP	moderate (foraging)
western mastiff bat	<i>Eumops perotis californicus</i>	-	SSC	HP	moderate (foraging)
Dulzura pocket mouse	<i>Chaetodipus californicus femoralis</i>	-	SSC	HP	moderate
long-legged myotis	<i>Myotis volans</i>	-	SA	HP	moderate (foraging)
northwestern San Diego pocket mouse	<i>Chaetodipus fallax fallax</i>	-	SSC	HP	moderate
pallid bat	<i>Antrozous pallidus</i>	-	SSC	HP	moderate (foraging)
San Diego black-tailed jackrabbit	<i>Lepus californicus bennettii</i>	-	SSC	HP	low
southern grasshopper mouse	<i>Onychomys torridus ramona</i>	-	SSC	HP	very low
spotted bat	<i>Euderma maculatum</i>	-	SSC	HP	moderate (foraging)

Table 23
Special-Status Wildlife Species With
Potential to Occur in the Project Impact Area
(Continued)

Common Name	Scientific Name	Status		Species P/A or Habitat Present (HP)	Potential to Occur in Project Impact Area
		USFWS	CDFG		
Townsend's big-eared bat	<i>Corynorhinus townsendii townsendii</i>	-	SSC	HP	moderate (foraging)
Fish					
arroyo chub	<i>Gila orcutti</i>	-	SSC	P	San Juan Creek
threespine stickleback ¹	<i>Gasterosteus aculeatus</i> ssp.	-	-	P	San Juan Creek
Invertebrates					
Harbison's dun skipper	<i>Euphyes vestris harbisoni</i>	-	SA	HP	very low
P/A: Presence/Absence HP: Habitat Present; USFWS: U.S. Fish and Wildlife Service; CDFG: California Department of Fish and Game Federal Designations FC Candidate State Designations SE Endangered ST Threatened FP Fully Protected SSC Species of Special Concern WL Watch List SA Special Animal					
¹ These species are addressed in the Southern Subregion EIS/EIR and so discussed in the NES; however, they do not have special-status. ² Status refers to nesting individuals, these species do not breed in Orange County. ³ Status refers to nesting individuals; however, no nesting habitat is present on the project. ⁴ Status is for nesting colony; however, no nesting habitat is present on the project site. ⁵ Status refers to the <i>D. p. brewsteri</i> subspecies.					
Source: Dudek, January 2010.					

Northern red-diamond rattlesnake was observed in the project impact area and arroyo chub and threespine stickleback were observed in San Juan Creek. Yellow-breasted chat was observed immediately east of the project impact area south of SR-74.

Environmental Consequences

Build Alternative "Proposed Project" (Preferred Alternative)

One animal species of concern, the northern red-diamond rattlesnake, was observed in the impact area. In addition, there is habitat that supports other special-status wildlife species. The arroyo chub and threespine stickleback have been documented in San Juan Creek and yellow-breasted chat was detected adjacent to the project area. These species were analyzed in the Draft Southern Subregion NCCP/MSAA/HCP and associated Joint programmatic EIR/EIS. The proposed project effects would be entirely within previously analyzed areas for which mitigation has already been provided. Therefore, proposed project effects would be considered less than substantial.

No Build (No Action) Alternative

The No Build Alternative would not result in any direct impacts on animal species of concern.

Avoidance, Minimization, and/or Mitigation Measures

The primary mitigation for project impacts is the preservation, monitoring, and management of the Southern Subregion Habitat Reserve, as described in detail in Chapter 7 of the Draft Southern Subregion NCCP/MSAA/HCP. The preparation of a BRCP consistent with the requirements of the Southern HCP, as required by Measure B-1, would sufficiently minimize potential impacts on animal species of concern.

Threatened and Endangered Species

Regulatory Setting

The primary federal law protecting threatened and endangered species is the Federal Endangered Species Act (FESA): 16 United States Code (USC), Section 1531, et seq. See also 50 CFR Part 402. This act and subsequent amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of this act, federal agencies, such as the Department, as assigned by FHWA, are required to consult with the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NOAA Fisheries) to ensure that they are not undertaking, funding, permitting or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species. The outcome of consultation under Section 7 is a Biological Opinion or an incidental take permit. Section 3 of FESA defines take as “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or any attempt at such conduct.”

Affected Environment

Information contained within this section is summarized from the November 2009 NES. The information was obtained from the database for special-status wildlife and plant species in the NCCP/MSAA/HCP study area, which was compiled from the cumulative results of more than 25 general and focused biological survey efforts conducted between approximately 1990 and 2004 and from existing databases. Focused surveys throughout the Southern Subregion NCCP/MSAA/HCP study area, including the Antonio Parkway/La Pata Avenue Widening Project area, were conducted for the federally listed Threatened coastal California gnatcatcher (*Polioptila californica californica*), the federally and State-listed Endangered least Bell’s vireo (*Vireo bellii pusillus*) and southwestern willow flycatcher (*Empidonax traillii extimus*), the federally listed Endangered arroyo toad (*Anaxyrus [Bufo] californicus*), Riverside fairy shrimp (*Streptocephalus woottoni*), San Diego fairy shrimp (*Branchinecta sandiegonensis*), and the federally listed Threatened and State-listed Endangered thread-leaved brodiaea (*Brodiaea filifolia*). These various survey efforts have resulted in a cumulative database that provides a strong portrayal of the abundance, richness, and distribution of biological resources in the project area.

Twelve federally Threatened or Endangered plant and wildlife species are known or have potential to occur in the Southern Subregion and were evaluated in the NES. Of these, seven federally-listed wildlife species have potential to occur on the project site and no federally-listed plants have potential to occur. Table 24 provides a listing of federally-listed wildlife species with potential to occur in the project impact area.

Table 24
Federally-Listed Species with
Potential to Occur in the Project Impact Area

Common Name	Scientific Name	Status		Species P/A or Habitat Present (HP)	Potential to Occur in Project Impact Area
		USFWS	CDFG		
Birds					
coastal California gnatcatcher	<i>Poliophtila californica californica</i>	FT	SSC	HP	low
least Bell's vireo	<i>Vireo bellii pusillus</i>	FE	SE	HP	low
southwestern willow flycatcher	<i>Empidonax traillii eximius</i>	FE	SE	HP	low
western yellow-billed cuckoo	<i>Coccyzus americanus occidentalis</i>	FC	SE	HP	very low
Amphibians					
arroyo toad	<i>Anaxyrus [Bufo] californicus</i>	FE	SSC	HP	moderate
Mammals					
Pacific pocket mouse	<i>Perognathus longimembris pacificus</i>	FE	SSC	HP	very low
Fish					
southern steelhead	<i>Oncorhynchus mykiss</i>	FE	SSC	HP	very low
P/A: Presence/Absence HP: Habitat Present; U.S. Fish and Wildlife Service; CDFG: California Department of Fish and Game					
Federal Designations					
FE Endangered					
FT Threatened					
State Designations					
SSC Species of Special Concern					
Source: Dudek January 2010.					

Conservation Programs Associated with Threatened and Endangered Species

Acting as Lead Agency under NEPA, the USFWS prepared an EIS in accordance with the provisions of the FESA for the Draft Southern Subregion NCCP/MSAA/HCP. This EIS was a joint NEPA/CEQA document with the County of Orange acting as lead CEQA agency in cooperation with the CDFG for the NCCP/MSAA/HCP. The

federal component of the Plan, the Southern Subregion HCP (Southern HCP) provides for the conservation of designated federally listed and unlisted species and their associated habitats that are found within the Southern HCP study area. The Southern HCP also provides regulatory coverage for projects addressed by the Southern HCP for all species and habitats that it identifies for coverage.

The USFWS distributed the Final EIS for public review on November 13, 2006. The Implementation Agreement (IA) was signed by the Participating Landowners (the County, RMV, and the SMWD) in December 2006. The USFWS issued a Record of Decision, signed the IA, approved the Southern HCP, and issued ITPs to RMV and the SMWD on January 10, 2007. The USFWS selected and approved Alternative B-12 as the Environmentally Preferred Alternative in the Southern HCP/ITP (January 2007); the Antonio Parkway widening was included in Alternative B-12 and addressed as part of Joint Programmatic EIS/EIR 584. Specifically, the widening of Antonio Parkway is included in Chapter 11 of the Draft Southern Subregion NCCP/MSAA/HCP and described in Appendix S of the NCCP/MSAA/HCP. The impacts associated with the proposed project are included in Chapter 13 of the Draft Southern Subregion NCCP/MSAA/HCP.

On January 10, 2007, the USFWS published its Intra-Service Formal Section 7 Consultation/Conference for Issuance of an Endangered Species Act Section 10(a)(1)(B) Permit (TE144140-0) for the Southern Orange NCCP/MSAA/HCP, Orange County, California (1-6-07-F-812.8) (“the Opinions”). The Opinions state that proposed incidental take will occur as a result of habitat loss and disturbance associated with urban development and other proposed activities (i.e., Covered Activities) identified in the Plan. The Opinions further identify “construction of residential, commercial, industrial and infrastructure facilities” as RMV-Covered Activities. The Opinions address 6 federally listed animals, 1 federally listed plant, and 25 unlisted plants and animals for a total of 32 species.

Since neither the Department nor the Federal Highway Administration (FHWA) were signatories to the Southern HCP, a consultation with the USFWS was required in order for the Department to fulfill its obligations under the FESA. On March 26, 2010, the Department requested that formal consultation pursuant to Section 7 of the FESA be initiated for the arroyo toad and the least Bell’s vireo. On June 16, 2010, the USFWS issued the Biological Opinion. The finding was to extend the incidental take coverage provided by the Southern HCP to the Department and that the proposed action must be consistent with the Southern HCP and its associated implementation agreement and permit. The USFWS reviewed the project and determined it is consistent with the Section 10(a)(1)(B) permit for the Southern HCP. Both the arroyo toad and the least Bell’s vireo are Covered Species in the Southern HCP. Therefore, the conservation program developed as part of the Southern HCP adequately minimizes and mitigates both the habitat loss and the incidental take of these Covered Species. A copy of the Biological Opinion is included in the correspondence provided at the end of Chapter 3.

Environmental Consequences

Build Alternative “Proposed Project” (Preferred Alternative)

As indicated above in Table 24, seven federally-listed Threatened or Endangered wildlife species have potential to occur on the project site based

on habitat. However, the potential for occurrence is very low to low for six of these species. Only the arroyo toad has a moderate potential to occur. However, the intent of the NCCP/MSAA/HCP program was to provide an alternative to “single species” conservation efforts. The purpose was to shift the focus from single-species, project-by-project conservation efforts to large-scale conservation planning at the natural community level to facilitate regional and subregional protection for a suite of species that inhabit a designated natural community or communities. The seven federally-listed Threatened or Endangered wildlife species that have potential to occur on the project site were all addressed in the Southern HCP. There are no impacts to federally-listed species associated with the project that have not been previously analyzed, and impacts from the widening of Antonio Parkway would be mitigated through the Conservation Program.

Conservation Programs Associated with Threatened and Endangered Species

The proposed project, as designed and described herein, includes some minor modifications of the project footprint that was conceptually analyzed in the Draft Southern Subregion NCCP/MSAA/HCP and Draft Joint Programmatic EIR/EIS. The NES demonstrates that the proposed project is generally consistent with the Draft Southern Subregion NCCP/MSAA/HCP and the USFWS-approved Southern HCP component of the Draft NCCP/MSAA/HCP.

No Build (No Action) Alternative

The No Build Alternative would not result in any direct impacts on Threatened or Endangered species.

Avoidance, Minimization, and/or Mitigation Measures

The primary mitigation for project impacts is the preservation, monitoring, and management of the Southern Subregion Habitat Reserve, as described in detail in Chapter 7 of the Draft Southern Subregion NCCP/MSAA/HCP. Measure B-1 requires the preparation of a BRCP consistent with the requirements of the Southern HCP, as described in Appendix U (Avoidance and Minimization Measures). No further mitigation is required.

Invasive Species

Regulatory Setting

On February 3, 1999, President Clinton signed Executive Order 13112 requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as “any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health.” FHWA guidance issued August 10, 1999 directs the use of the state’s noxious weed list to define the invasive plants that must be considered as part of the NEPA analysis for a proposed project.

Affected Environment

Information contained within this section is summarized from the November 2009 NES.

Non-native grassland covers 14.4 acres of the project impact area. This vegetation type is dominated by a variety of native and non-native herbs with several annual forbs. Non-native species include slender oat (*Avena barbata*), wild oat (*Avena fatua*), foxtail chess (*Bromus madritensis*), soft chess (*Bromus hordeaceus*), ripgut grass (*Bromus diandrus*), mustards (*Brassica* spp.), wild radish (*Raphanus sativus*), tocalote (*Centaurea melitensis*), Italian thistle (*Carduus pycnocephalus*), and artichoke thistle (*Cynara cardunculus*). Of these, Italian thistle and artichoke thistle are on the California State-listed Noxious Weeds List. Other species are listed in the California Invasive Plant Council's [California Invasive Plant Inventory Database](#).

No Build (No Action) Alternative

The No Build Alternative would not result in any impacts from invasive species.

Environmental Consequences

Build Alternative "Proposed Project" (Preferred Alternative)

The proposed project would include landscaping of the roadway right-of-way. Federal requirements prohibit the planting of exotic species identified as "invasive" because seeds from invasive species could escape to natural areas and degrade the native vegetation. However, due to Department policies, none of the species on the California list of noxious weeds will be used for landscaping for the proposed project.

Avoidance, Minimization, and/or Mitigation Measures

The project is bound by the requirements of the NCCP/MSAA/HCP. Chapter 13 of the Draft Southern Subregion NCCP/MSAA/HCP, Section 13.2.3, b.2, p. 13-21 states, "All plants identified by the California Exotic Pest Plant Council as an invasive risk in southern California shall be prohibited from development and fuel management zones adjacent to RMV Open Space (term Habitat Reserve in this NCCP/MSAA/HCP)".

Compliance with the provisions of the NCCP/MSAA/HCP would satisfy the requirements of Executive Order 13112 on invasive species.

Cumulative Impacts

Regulatory Setting

Cumulative impacts are impacts on the environment that result from the incremental impact of a proposed project together with the impacts of other past, present and reasonably foreseeable future projects. Cumulative impacts can result from individually minor but collectively significant impacts taking place over a period of time.

Cumulative impacts on resources in the project area may result from the impacts of the transportation project together with other past, present, and reasonably foreseeable projects such as residential, commercial, industrial, and other development, as well as from agricultural activities and the conversion to more intensive types of agricultural cultivation. Such land use activities may result in cumulative effects on a variety of natural resources such as species and their habitats, water resources, and air quality. Additionally, they can also contribute to cumulative impacts on the urban environment such as changes in community character, traffic volume and patterns, increased noise, housing availability, and employment.

Cumulative impacts are best evaluated at a geographic scale that reflects their extent and likelihood of occurrence, such as a watershed or air shed, and must not be artificially limited to jurisdictional boundaries. Additionally, different resources may have different cumulative impact areas.

A definition of cumulative impacts under NEPA can be found in 40 CFR, Section 1508.7 of the CEQ Regulations.

Evaluation of Cumulative Impacts

The cumulative evaluation considers expected growth from the adopted general plans for the local jurisdictions and regional development projections. This provides a long-range view of expected growth in the region. Four specific projects in the immediate vicinity of Antonio Parkway have been identified that would have the greatest potential for contributing to cumulative impacts. These are the Ranch Plan, the La Pata Avenue Extension, Prima Deshecha Landfill, and Whispering Hills. All of these projects have been assumed in the local general plans and the regional projections; therefore, they have been incorporated into baseline for both the project and cumulative analysis. Since the Ladera Ranch Planned Community is mostly built out, this project is assumed as part of the baseline and is reflected in the growth trends of the region.

The regional projections are based on the Orange County Projections 2006 developed by the Center for Demographic Research at the California State University, Fullerton. These projections are countywide growth and development forecasts based on input from the County of Orange and the cities of Orange County. These projections reflect adopted land uses and future growth scenarios based on local land use policies. The purpose of establishing countywide projections is to establish a consistent database for jurisdictions to use for planning efforts. SCAG uses these adopted projections for regional planning efforts, such as the Air Quality Management Plan, the Regional Transportation Plan, and Regional Growth Management Element.

The following provides an overview of each of the specific projects identified:

- The Ranch Plan encompasses 22,815 acres, of which 75 percent will be retained in open space. In 2004, this area was approved for development of 14,000 dwelling units, 3,480,000 sf of urban activity center uses, 500,000 sf of neighborhood center uses, and 1,220,000 sf of business park uses. The subject portion of Antonio Parkway is located within the Ranch Plan boundary.
- Alignment studies for the La Pata Avenue Extension are currently underway by the County of Orange. This roadway project would construct an extension of La Pata Avenue from south of Ortega Highway to the San Clemente city limits. The extension of La Pata Avenue has been assumed in the local general plans, the Master Plan of Arterial Highways, and the RTIP. The La Pata Avenue Extension would start at the southern terminus of the Antonio Parkway Widening Project.
- The Prima Deshecha Landfill is located approximately 1.8 miles south of the Antonio Parkway/La Pata Avenue/SR-74 intersection. The landfill is operated by the County of Orange. The adopted 2001 Prima Deshecha Landfill General Development Plan (GDP) assumes full buildout of landfill operations through 2064. The continued operation of the landfill and the associated truck traffic has been assumed in the long-term analysis for the region. Antonio Parkway would continue to provide access to the landfill.
- Whispering Hills is an approved residential development project located in the City of San Juan Capistrano southwest of the project site. This planned community includes the San Juan Hills High School. The residential component of the project has not been constructed; however, models are expected to be constructed in late 2010. This project is relatively small in nature with a proposed 155 single-family homes.

Community Resources

The project is located in an undeveloped area of unincorporated Orange County. However, it is immediately adjacent to the community of Ladera Ranch and traverses the area that has been approved for the development of the Ranch Plan, a large scale urban development. To ensure the Resource Study Area for community resources encompasses a large enough area to allow for assessment of potential impacts, the area being evaluated includes the planned communities of Ladera Ranch and the Ranch Plan, and the City of San Juan Capistrano.

This area has experienced substantial growth over the past decade and could be characterized as transitioning from a rural to an urban community. Due to the large expanse of undeveloped land, growth is expected to continue over the foreseeable future, with implementation of the Ranch Plan being the largest component of future growth in the region. Within this portion of unincorporated Orange County, development has generally occurred through implementation of planned communities. The planned community approval process evaluates the availability of services, provides for community amenities, and considers the fiscal effects of development. In addition, through the planning process, a community character is established. Overall, the Community Resource Study Area is well-functioning and has the resources to provide the necessary services for their respective communities. The overall “health” of the Community Resource Area would be

considered good based on livable communities qualities, such as open space, recreational facilities, and job/housing balance.

The evaluation of cumulative impacts to the community considers a variety of issues such as potential direct and indirect effect on land uses, growth, community character, environmental justice, public services and utilities, as well as air quality and noise. All these factors can contribute to potential impacts to the community. However, the Antonio Parkway project would not contribute to cumulative impacts associated with environmental justice and public services and utilities because the proposed project would not result in impacts in these areas.

From a land use perspective, the community is projected to continue the transition to an urbanized environment. As shown in Figure 5, substantial growth is projected for the area. Cumulatively, the approved growth would continue the transition of the community character from rural environment, to suburban community, to urban center. The most dramatic change will be associated with the development of the Ranch Plan. The Ladera Ranch Planned Community is mostly built out and the City of San Juan Capistrano is projected to have an approximate 10 percent increase in residential units and a 20 percent increase in employment uses by 2035.

The most notable change in community character will be the development of open space and the extension of the urban footprint. The Ranch Plan project will transition the area immediately adjacent to Antonio Parkway to suburban uses. Though 75 percent of the land area within the Ranch Plan Planned Community boundaries will remain open space, it will change the character of the area. The type of development will generally be a continuation of the uses and densities that currently exist in Ladera Ranch. Therefore, though the Ranch Plan would result in the loss of open space, when viewed in the larger context, the cumulative growth will be a continuation of the same community character that exists in the region and would not be a degradation of the area. This transition is consistent with the General Plan and regional growth assumptions.

Since the transition of the community is a component of long-range planning for the area (i.e., Orange County General Plan, Master Plan of Arterial Highways, Regional Transportation Plan, Regional Transportation Improvement Program, and SCAG and local growth forecasts), the question that must be examined is if the proposed project would impede the long-range planning efforts for the community. The long-range planning documents for the area all assume the construction of Antonio Parkway to full arterial standards. Since the Antonio Parkway improvements are predominately within the existing road right-of-way, the proposed project would not have substantial direct impacts on the community and would not adversely affect the implementation of the long-range planning (cumulative projects) for the community.

The proposed project would have beneficial effects on the community associated with improved circulation. The long-range (2035) analyses conducted for traffic, air quality, and noise reflect growth and development consistent with the local General Plans. Thus, the 2035 analysis is assumed to accurately reflect impacts that would be expected with implementation of cumulative projects. These analyses demonstrate that improved circulation has beneficial effects on air quality as a result of shorter vehicle queues and less idling time. Vehicle idling and stop/start actions contribute a disproportionately high amount of air emissions when compared to free-flowing traffic. Thus, the reduction of vehicle queue length and idle time are

anticipated to result in positive effects on air quality. The proposed project would result in an incremental increase in noise adjacent to the roadway. With the implementation of the Ranch Plan, there may be sensitive receptors near roadway. However, when specific development plans for land uses are approved, the developer would be responsible for addressing the noise associated with the 2035 traffic volumes and provide attenuation, as necessary.

In summary, with the development of the land uses that are consistent with long-range projections—which include development of the Ranch Plan and increased development in the adjacent areas of San Juan Capistrano—the community resources will experience change. The proposed project is one component of this transition. As part of the long-range planning efforts for the region, provision of transportation improvements is critical to provide adequate infrastructure to serve the planned land uses. With the implementation of the mitigation measures adopted in conjunction with the specific land use projects, the overall cumulative impacts on the community are not expected to be adverse.

Visual Resources

Visual impacts are relative to the visual environment in which they occur. Visual impacts can extend beyond the physical areas of project construction. The Resource Study Area, with respect to potential cumulative impacts to visual resources, is the same as the area evaluated for project impacts and is based on the proposed project's viewshed.

As indicated above, the area is transitioning from rural to urban uses. Immediately north of the project site is the Ladera Ranch Planned Community. This area is mostly built out with a mix of residential, employment, and commercial uses. To the west of the project site, the city of San Juan Capistrano is developed with predominately residential uses. The visual character for this portion of the Visual Resource Study Area would be considered suburban. Immediately adjacent to the project site, the area is undeveloped and rural in character. San Juan Creek is a prominent visual resource. The hills surrounding the project site provide a scenic background and an opportunity for expansive views. Development of the Ranch Plan will result in a change to the character immediately adjacent to the roadway. However, 75 percent of the Ranch Plan will remain in open space and the major ridgelines will be preserved. The visual quality of the area would be identified as scenic.

In order for cumulative aesthetic impacts to occur, elements of cumulative projects would need to be located close to each other in order to assess cumulative impacts to the viewshed. If the projects were not in proximity to each other, the viewer would not perceive them in the same scene.

As previously noted, the project would have limited visual impacts because the ultimate grading for the six-lane facility was done at the time the initial four lanes were constructed. The most prominent element of this project would be the new bridge. However, even the new bridge would be consistent with the design of the existing bridge and would be perceived by the viewer as a widening of the existing facility.

The cumulative project that would have the greatest potential to contribute to cumulative visual impacts would be the Ranch Plan because it would be constructed in the immediate proximity of the Antonio Parkway. Development in the City of San Juan

Capistrano would generally not contribute to cumulative visual impacts because intervening topography and development limit it from being in part of the same viewshed as the Antonio Parkway project. Ladera Ranch is mostly built-out; therefore, the visual characteristics would not be expected to change.

The homes on the southern boundary of the Covenant Hills development would experience the greatest cumulative change in visual character. These homes are view-oriented and look out to the south and southeast. Though the widening of Antonio Parkway would not substantially change their views, development of the Ranch Plan would alter the near and mid-range views from these homes. Currently, these homes have open space views. With the development of the Ranch Plan, much of the south and east of Covenant Hills will become residential and urban activity uses. Because the Ranch Plan is preserving approximately 75 percent of the area in open space, the major ridgelines that provide a visual backdrop for the views from Covenant Hills will be retained, as will other areas of open space that separate the development portions of the various planning areas. Due to elevation differences between the Covenant Hills development and the adjacent Ranch Plan development, the view-orientation will not be blocked but will be modified. Although this development consists of custom home sites that were graded when the Ranch Plan was approved, many of the homes had not been built at the time. Therefore, many of the current homeowners are aware of the pending changes. Visually, the Ranch Plan would be a continuation of the type of development that exists in Ladera Ranch immediately north of the project site. With cumulative projects, views from the Rancho Mission Viejo Riding Park at San Juan Capistrano would change in a similar manner.

Though the study area is projected to experience a substantial visual change within the next five years, the Antonio Parkway project would have a very limited contribution to a cumulative impact because the project-specific impacts would be minimal. The widening of Antonio Parkway would not foster the development of the Ranch Plan and would not, therefore, indirectly contribute to the change in visual character. The Antonio Parkway widening has been assumed in the long-range transportation planning for the County of Orange since the mid-1990s prior to the processing of the Ranch Plan project in 2004.

Views from SR-74 approaching the Antonio Parkway intersection would be modified with the development of the Ranch Plan. Due to topography, there is only a limited segment of SR-74 that has views of Antonio Parkway and that would be able to see the roadway widening and the Ranch Plan development together. As discussed above, open space areas would transition to developed areas.

The proposed project, when combined with the Ranch Plan and surrounding development, would contribute to the ongoing urbanization of the area; however, it is this urban context that would minimize the cumulative visual impact. This urban core is consistent with the land use and associated visual context of the local General Plan. The cumulative projects would not be substantially different from the existing development surrounding the project site. As a result, cumulative visual impacts would not be adverse and the overall quality of the visual setting would remain scenic.

Water Resources

The evaluation of water resources considers potential impacts to hydrology, floodplain, and water quality. The Resource Study Area for water resources is San Juan Creek because that is the only body of water that could potentially be affected by the proposed project. The overall health of the resource in the vicinity of the project is good. Downstream, in proximity to the coast, lower San Juan Creek is listed as an impaired water body due to bacterial indicators.

The Antonio Parkway project would have negligible effects on the water surface level and would not modify the 100-year floodplain. The project would also implement BMPs that would treat runoff from the roadway.

As with the other resources evaluated, the Ranch Plan would have the greatest cumulative contribution to changes to water resources. The Ranch Plan would result in modifications to the 100-year floodplain. The Antonio Parkway project would not contribute to this impact. Additionally, when adopting the Ranch Plan the County of Orange required extensive water quality and monitoring programs associated with water resources to ensure no deterioration in water quality or increased flooding impacts. With the exception of pathogen levels, the Ranch Plan project would not have any substantial adverse impacts after the implementation of avoidance, minimization, and mitigation measures. The Antonio Parkway project would not contribute to elevated pathogen levels. Therefore, no substantial cumulative water resource impacts are anticipated.

Biological Resources

The Resource Study Area for biological resources is the Southern HCP and SAMP boundaries because these planning programs were developed to address habitat conservation and species protection in relationship to the cumulative effects of development. The goal of these programs is to maintain the health of the biological resources within their planning boundaries.

The Biological Resource Study Area supports a wide variety of vegetation communities including coastal sage scrub, annual grassland, riparian, and oak forest. Agriculture and developed areas also occur on the study area. Wildlife corridors provide connectivity for daily and seasonal migration. The overall health of the area is good, supporting a high diversity of biological resources, including 24 special status species.

The project would have limited impacts on biological resources because the majority of the grading occurred during the first phase of the project. As summarized in Table 20, the project generally would result in fewer impacts on Conserved Vegetation Communities than was assumed as part of the subregional planning programs. The only additional impact to Conserved Vegetation Communities that was not analyzed in the Southern HCP is 0.5 acre of impact to non-native grassland (0.1 acre permanent and 0.4 acre temporary impact). However, it is worth noting that impacts to Conserved Vegetation Communities in the Southern HCP were rounded to the nearest full acre so a 0.5 acre impact is within rounding error of the impacts analyzed in the HCP.

Though the proposed project would result in the removal of Conserved Vegetation Communities, these impacts have been accounted for in the Southern HCP and the

SAMP, which evaluated and addressed the potential for cumulative impacts within their respective study areas. Both programs adopted extensive avoidance, minimization, and mitigation measures to protect sensitive biological resources on a subregional level. Due to the limited impacts on biological resources from the proposed project and the implementation of the provisions of the Southern HCP and SAMP programs, the cumulative impacts would be less than substantial.

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Chapter 3—Comments and Coordination

AGENCY CONSULTATION

Early and continuing coordination with the participating public agencies has been an essential part of the environmental process to determine the scope of environmental documentation; the level of analysis; potential impacts and mitigation measures; and related environmental requirements. This chapter summarizes the results of the efforts to fully identify, address, and resolve project-related issues through early and continuing coordination.

Resource and Regulatory Agencies

As previously mentioned, the Antonio Parkway Widening Project has been assumed in regional planning programs designed to address the biological resources on a subregional level. Through the development of these subregional planning programs, there was a multi-year coordination program with the County of Orange, the U.S. Army Corps of Engineers (ACOE), the U.S. Fish and Wildlife Service (USFWS), the California Department of Fish and Game (CDFG), and the San Diego Regional Water Quality Control Board.

The development of these subregional planning programs also included the preparation of environmental documents prepared pursuant to the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA). The environmental documents, which included the widening of Antonio Parkway, were subject to review by agencies and members of the public. Additional public outreach programs were implemented, as well.

San Juan Creek and Western San Mateo Creek Watersheds Special Area Management Plan (SAMP)

Antonio Parkway was included as part of the baseline assumptions in the *San Juan Creek and Western San Mateo Creek Watersheds SAMP* and Final Environmental Impact Statement (EIS) prepared by the ACOE. A SAMP is a voluntary watershed-level planning and permitting process involving local landowners and public agencies that seek permit coverage under Section 404 of the Federal Clean Water Act for future actions that would affect jurisdictional “Waters of the U.S.”. The purpose of a SAMP is to provide for reasonable economic development and the protection and long-term management of sensitive aquatic resources (biological and hydrological). Under a SAMP, federal “Waters of the U.S.” (including wetlands) are avoided, and unavoidable impacts are minimized and fully mitigated to the extent feasible. The San Juan Creek and Western San Mateo Creek Watersheds SAMP provides a framework for permit coverage for the San Juan Creek Watershed (approximately 113,000 acres) and the western portion of the San Mateo Creek Watershed (approximately 15,104 acres). The SAMP study area includes the 22,815-acre Ranch Plan, which was identified in the study as the “RMV Planning Area”.

As previously indicated, the SAMP was prepared as part of a coordinated public planning process that includes the preparation of the Ranch Plan and the Southern Subregional National Community Conservation Plan/Master Streambed Alteration Agreement/Habitat Conservation Plan (NCCP/MSAA/HCP). The ACOE prepared a

Draft EIS (November 2005) for the *San Juan Creek and Western San Mateo Creek Watersheds SAMP*. The Final EIS was distributed for public review on January 12, 2007, and a Record of Decision was issued on March 16, 2007. The ACOE selected and approved Alternative B-12, which included the proposed improvements to Antonio Parkway, as the Environmentally Preferred Alternative in the SAMP.

The SAMP establishes three regulatory permitting procedures: (1) Regional General Permit Procedures for Maintenance Activities Outside the RMV Planning Area; (2) Letter of Permission Procedures for Future Qualifying Applicants Subject to Future Section 404(b)(1) Guidelines Review Outside the RMV Planning Area; and (3) Long-Term Individual Permits/Letters of Permission for Dredge and Fill Activities within the RMV Planning Area. With respect to the Ranch Plan project, the ACOE has issued an Individual Permit of extended duration to specify allowable impacts to "Waters of the U.S." over the life of the Ranch Plan project. The Long-Term Individual Permit requires additional review and analysis as individual projects are proposed within the Ranch Plan in order to ensure consistency with allowable impacts and the terms and conditions of this long-term Individual Permit. The ACOE would review specific activities under the Letter of Permission (LOP) procedures for the geographic area covered by the Individual Permit as each activity is proposed for implementation. The LOP procedure is intended as a verification process for determining consistency with the Long-Term Individual Permit and as an avenue for more detailed, site-specific review of indirect impacts to Waters of the U.S.

In addition to the Long-Term Individual Permit, the ACOE also issued a 404 permit for Planning Area 1 and related infrastructure improvement including the Proposed Project.

Southern Subregion NCCP/MSAA/HCP

Acting as Lead Agency under the NEPA, the USFWS prepared an EIS in accordance with the provisions of the Federal Endangered Species Act (FESA) for the Draft Southern Subregion NCCP/MSAA/HCP. This EIS was a joint NEPA/CEQA document with the County of Orange acting as lead CEQA agency in cooperation with the CDFG for the NCCP/MSAA/HCP. The federal component of the Plan, the Southern Subregion HCP provides for the conservation of designated federally listed and unlisted species and their associated habitats that are currently found within the 132,000-acre Southern HCP study area. The Southern HCP also provides regulatory coverage for projects addressed by the Southern HCP for all species and habitats that it identifies for coverage.

The USFWS distributed the Final EIS for public review on November 13, 2006. The Implementation Agreement (IA) was signed by the Participating Landowners (the County, RMV, and Santa Margarita Water District [SWMD]) in December 2006. The USFWS issued a Record of Decision, signed the IA, approved the Southern HCP, and issued Incidental Take Permits (ITPs) to RMV and SMWD on January 10, 2007. The USFWS selected and approved Alternative B-12 as the Environmentally Preferred Alternative in the Southern HCP/ITP (January 2007). The proposed improvements to Antonio Parkway were included in Alternative B-12 and were addressed as part of the Joint Programmatic EIS/EIR 584. Specifically the widening of Antonio Parkway is included in Chapter 11 of the Draft Southern Subregion NCCP/MSAA/HCP and described in Appendix S of the NCCP/MSAA/HCP. The widening improvements are graphically represented on Figure 187-R (Proposed

Circulation Network) and Figure 166-M (Rancho Mission Viejo Covered Activities and Open Space Areas), attached in Section 9, Appendix. The impacts associated with the Antonio Parkway project are included in Chapter 13 of the Draft Southern Subregion NCCP/MSAA/HCP, specifically Tables 13-17, Table 13-18 and Tables 13-19A and 13-19B.

Consultation under FESA - Biological Opinion/Conference Opinion 1-6-07-F-812.8

On January 10, 2007, the USFWS published its Intra-Service Formal Section 7 Consultation/Conference for Issuance of the Endangered Species Act Section 10(a)(1)(B) Permit (TE144140-0) for the Southern Orange Natural Community Conservation Plan/Master Streambed Alteration Agreement/Habitat Conservation Plan, Orange County, California (1-6-07-F-812.8) ("the Opinions"). The Opinions state that proposed incidental take will occur as a result of habitat loss and disturbance associated with urban development and other proposed activities (i.e., Covered Activities) identified in the Plan. The Opinions further identify "construction of residential, commercial, industrial and infrastructure facilities" as RMV Covered Activities (Page 14, FWS-OR-812.8). Table 3 in the Opinions sets forth impacts associated with all RMV Covered Activities including construction of infrastructure facilities such as roads. Table 3 is included in Section 7, Appendix. The Opinions address 6 federally listed animals, 1 federally listed plant, and 25 unlisted plants and animals for a total of 32 species.

Section 7 Consultation

Since neither the Department nor the Federal Highway Administration (FHWA) were signatories to the Southern HCP, a consultation with the USFWS was required in order for the Department to fulfill its obligations under the FESA. On March 26, 2010, the Department requested that formal consultation pursuant to Section 7 of the FESA be initiated for the arroyo toad and the least Bell's vireo. On June 16, 2010, the USFWS issued the Biological Opinion. The finding was to extend the incidental take coverage provided by the Southern HCP to the Department and that the proposed action must be consistent with the Southern HCP and its associated implementation agreement and permit. The USFWS reviewed the project and determined it is consistent with the Section 10(a)(1)(B) permit for the Southern HCP. Both the arroyo toad and the least Bell's vireo are Covered Species in the Southern HCP. Therefore, the conservation program developed as part of the Southern HCP adequately minimizes and mitigates both the habitat loss and the incidental take of these Covered Species. A copy of the Biological Opinion is included in the correspondence provided at the end of this chapter.

Air Quality Conformity

As discussed under Air Quality, the FHWA and the U.S. Environmental Protection Agency (USEPA) jointly developed Transportation Conformity Guidance for Qualitative Hot-spot Analyses in PM_{2.5} and PM₁₀ Nonattainment and Maintenance Areas (PM Guidance) on March 29, 2006. The proposed project is located within a federal PM_{2.5} nonattainment area, which would necessitate a hot-spot analysis unless the project is determined to not be a project of air quality concern (POAQC).

The POAQC determination is based upon whether or not the project would result in an increase in PM_{2.5} emissions. Diesel exhaust emissions include fine particulate matter (PM_{2.5}) pollutants. The nature of this project is such that it would not result in a significant overall increase in the number of motor vehicles, including diesel buses and trucks, utilizing the facility.

The Southern California Transportation Conformity Working Group (TCWG) must make a determination whether a project is a POAQC. The membership of the Southern California TCWG includes federal (USEPA, USEPA Region 9, FHWA, Federal Transit Authority), State (California Air Resources Board, the Department), regional (Air Quality Management Districts, Southern California Association of Governments [SCAG]), and sub-regional (County Transportation Commissions, the Transportation Corridor Agencies) agencies and other stakeholders. On January 26, 2010, the TCWG found that the project is not a POAQC.

An Air Quality Conformity Analysis Report was prepared and submitted to the FHWA with a request for a project-level conformity determination. In a letter dated April 26, 2010, the FHWA issued a conformity determination for the Antonio Parkway Widening Project. This letter is included at the back of this chapter.

Cultural Resources Outreach

Through the preparation of the technical studies for cultural resources, a request was made to the Native American Historical Commission (NAHC) for a review of the Sacred Lands Inventory to determine if any known cultural properties are present within or adjacent to the Area of Potential Effect (APE). The NAHC responded on November 16, 2009. The NAHC provided a list of individuals/organizations that may have knowledge of cultural resources in the project area.

The Department consulted with the State Historic Preservation Officer (SHPO) to obtain concurrence that the three archaeological sites (CA-ORA-26, CA-ORA-881, and CA-ORA-902) located within the project's Area of Potential Effect (APE) are not eligible for the National Register of Historic Places (NRHP) because the sites lack integrity and subsurface deposits. The SHPO concurred with these findings in a letter dated April 19, 2010. The letter from the SHPO is attached at the end of this chapter.

PUBLIC PARTICIPATION

Outreach in Conjunction with Subregional Planning Programs

In conjunction with the NCCP/HCP program, the lead agencies conducted an extensive public outreach and scoping process. This outreach involved the presentation of a large scale program, of which Antonio Parkway was a component. This scoping effort dates back to July 1993, when the County and USFWS conducted a Joint Scoping Meeting covering both the Southern and Central and Coastal Subregion NCCPs. A series of subsequent public meetings and "working group" meetings were held over an extended number of years. The "working group" meetings involved the NCCP consultant team, landowners, CDFG and USFWS staff, and environmental interest representatives. These meetings and various outreach efforts continued throughout the development of the NCCP/MSAA/HCP. In addition, there were newsletters sent to the interested members of the community on the development of the program.

Through the meetings on the NCCP/HCP, it was decided that there should be a closely coordinated effort to address wetland resources in the region. Thus the ACOE and the CDFG initiated the preparation of a Special Area Management Plan and a Master Streambed Alteration Agreement (SAMP/MSAA) that would address the need to avoid, minimize and/or mitigate potential impacts to aquatic resources on a watershed level.⁶ Because the NCCP/HCP and the SAMP/MSAA were so closely related, much of the public outreach on these programs was done together to foster a better understanding of these large scale planning programs and how they complemented each other.

Construction of Antonio Parkway to full arterial width was assumed as part of the larger planning program and included as a planned activity with the development of alternative for the NCCP/MSAA/HCP program. As a result, there would have been long standing knowledge of the future widening of Antonio Parkway for members of the public that participated in any of the outreach programs. No comments specific to the widening of Antonio Parkway were raised as part of the subregional planning programs. However, Antonio Parkway widening would not have been a focus of the outreach meetings, in part because of the lack of impacts associated with the project, there would have been nominal public interest/concern about the project.

As noted above in the discussion of Agency Consultation, environmental documents were prepared for both the NCCP/MSAA/HCP and the SAMP. These documents were available for public review and comment. Public hearings were held in conjunction with the adoption of these programs.

The Ranch Plan

As discussed in Land Use, the Ranch Plan is a large scale land use planning program that includes the land adjacent to the subject portion of Antonio Parkway. This land use planning program occurred in conjunction with the NCCP/MSAA/HCP and the SAMP so they could draw on the same scientific information on the resources within the region. Improving Antonio Parkway to full arterial standards was assumed as part of the Ranch Plan. The County of Orange conducted a public outreach program including scoping meetings and workshops for the Ranch Plan. FEIR 589 was prepared to address the impacts associated with the construction of the Ranch Plan and included the evaluation of the impacts associated with the Antonio Parkway widening. FEIR 589 was circulated for public review and comment. No comments specific to the widening of Antonio Parkway were raised as part of the Ranch Plan scoping process or as part of comments on FEIR 589.

Historical Resources Outreach

In conjunction with the preparation of this environmental document, the San Juan Capistrano Historical Society was contacted. In addition, representatives from the Juaneño Band of Mission Indians, Acjachemen Nation were contacted to seek input on the potential resources within the study area.

⁶ Initially, the SAMP and MSAA were being prepared as a joint project with the ACOE and the CDFG. Through the project development process, it was determined to combine the MSAA with the ongoing NCCP/HCP, for which CDFG was a responsible agency. The ACOE then moved ahead with the preparation of the SAMP and the accompanying EIS as a separate project.

PUBLIC REVIEW PROCESS

Public Notice

The Department circulated the EA for the proposed Antonio Parkway Widening Project for a 30-day public review on June 14, 2010. The public comment period was between June 14, 2010 and July 14, 2010.

The Department mailed a Notice of Availability (NOA) of the Environment Assessment and Announcement of a Public Meeting – Open House to various State and local agencies, elected officials, and organizations. The NOA also provided the pertinent information regarding the Public Meeting – Open House held on June 29, 2010. The NOA was published in the *Orange County Register* on June 14, 2010, and in the *Excelsior* (Spanish language newspaper) on June 18, 2010.

The EA and associated technical studies were available for review at Caltrans District 12 Office and the following locations; it was also posted on the Department's website <http://www.dot.ca.gov/dist12/files/antonio/index.htm>.

County of Orange
Planned Communities Department
300 North Flower Street
Santa Ana, CA 92702

Ladera Ranch Library
29551 Sienna Parkway
Mission Viejo, CA 92694

San Juan Capistrano Library
31495 El Camino Real
San Juan Capistrano, CA 92589

Mission Viejo Library
100 Civic Center
Mission Viejo, CA 92691

The document and NOA instructed agencies and the public to direct comments on the EA to the Caltrans District 12 office. E-mail comments were directed to AntonioPkwy_D12@dot.ca.gov. At the end of the 30-day public review period four comment letters were received.

Public Information Meeting

The Department, in coordination with the County, conducted the a public meeting – open house on June 29, 2010, to provide the public with information about the project and to solicit comments on the draft EA. The meeting was held at the Santa Margarita Water District Headquarters, 26111 Antonio Parkway, Las Flores, CA 92688. A information handout and comment cards were available for distribution. No one from the public attended this public meeting – open house.

RESPONSES TO COMMENTS

A total of four comment letters were received on the project during the public review period. The State Clearinghouse identified the agencies that received the document; however, no comments were provided. The County of Orange and the City of San Juan Capistrano did not identify any issues of concern but requested that they be kept abreast of project through the subsequent phases of the project. The California Department of Toxic Substance Control provided a list of concerns that should be addressed in the EA, if applicable. A copy of the comment letters received and the written response to the comments is provided below.

32400 PASEO ADELANTO
SAN JUAN CAPISTRANO, CA 92675
(949) 493-1171
(949) 493-1053 FAX
www.sanjuancapistrano.org



Comment Letter 1

MEMBERS OF THE CITY COUNCIL

SAM ALLEVATO
LAURA FREESE
THOMAS W. HRIBAR
MARK NIELSEN
DR. LONDRES USO

July 14, 2010

Charles Baker
Caltrans Environmental Planning Branch
3347 Michelson Drive, Suite 100
Irvine, CA 92612

Subject: Antonio Parkway Widening Project - Draft Environmental Assessment
Comments

Mr. Baker:

We appreciate the opportunity to review and comment on the Environmental Assessment for the proposed project. We understand that the scope of the project consists of the addition of two travel lanes, one in each direction, to the existing Antonio Parkway for an approximate 1.4-mile segment within unincorporated Orange County with turn lanes provided at SR-74 and at future local intersections. The project limits would extend the improvements approximately 900 feet south of the intersection with SR-74 (Ortega Highway) to facilitate traffic operations and provide for a safe transition to the existing lane configuration on La Pata.

We've reviewed the plans and determined that we have no concerns or issues with the Environmental Assessment. We've also reviewed the project limits vis-à-vis the recent purchase & sales agreement documents and encumbrance maps prepared for the City of San Juan Capistrano's recent acquisition of the "Riding Park." Our review indicates that the proposed improvements and grading appears to be within the necessary right-of-way and temporary construction easements (TCE) established as part of the acquisition. However, in order to assure all planned road improvement work remains within the right-of-way and temporary construction easements (TCE), we ask that at such time the construction documents have been prepared, that a set be transmitted to Nasser Abbaszadeh, Public Works Director for review and confirmation. Thank you for your consideration.

Sincerely,

Grant Taylor
Development Services Director

Cc: Joe Tait, City Manager
Steven Apple, AICP, Deputy City Manager
Cindy Russell, Chief Financial Officer
Nasser Abbaszadeh, Public Works Director

San Juan Capistrano: Preserving the Past to Enhance the Future

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Comment Letter 1
The City of San Juan Capistrano
Dated July 14, 2010

Response 1: Your assessment of the project is correct. All construction will be done within the existing right-of-way and temporary construction easement (TCE). To clarify, as shown in Figure 11, there is no need for a TCE at the Rancho Mission Viejo Riding Park at San Juan Capistrano because all improvements will be within the existing right-of-way. The right-of-way for the improvements to La Pata Avenue has already been dedicated in fee to the County. The dedication included the area required for roadway slope, drainage, and construction activities. The Department has notified the County of Orange of the need to send a copy of the construction documents as they are developed to the City's Public Works Director for review and confirmation.

NCL 10-020

July 12, 2010

Mr. Charles Baker
Caltrans Environmental Planning Branch
3347 Michelson Drive
Suite 100
Irvine, CA 92612

SUBJECT: Antonio Parkway Widening Project

Dear Mr. Baker:

The County has reviewed the Environmental Assessment for the Antonio Parkway Widening Project located in unincorporated Orange County and has no comments at this time. We would like to be advised of any further developments, therefore please keep us on the distribution list for future notifications related to this project.

} 1

If you have any questions, please contact Chris Uzo Diribe at (714)667-8845.

Sincerely,



Michael Balsamo, Manager
General Land Use Planning

Comment Letter 2
Orange County Public Works
Dated July 12, 2010

Response 1: The Department acknowledges the County of Orange's interest in the project and will ensure that they receive all distributions associated with the project.



ARNOLD SCHWARZENEGGER
GOVERNOR

July 15, 2010

STATE OF CALIFORNIA

GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH

STATE CLEARINGHOUSE AND PLANNING UNIT

Comment Letter 3



CYNTHIA BRYANT
DIRECTOR

Charles Baker
California Department of Transportation, District 12
3347 Michelson Drive, Suite 100
Irvine, CA 92612

Subject: Antonio Parkway Widening Project
SCH#: 2010061034

Dear Charles Baker:

The State Clearinghouse submitted the above named Environmental Assessment to selected state agencies for review. The review period closed on July 14, 2010, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

Scott Morgan
Acting Director, State Clearinghouse

1400 10th Street P.O. Box 3044 Sacramento, California 95812-3044
(916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

**Document Details Report
State Clearinghouse Data Base**

SCH# 2010061034
Project Title Antonio Parkway Widening Project
Lead Agency Caltrans #12

Type EA Environmental Assessment
Description NOTE: Review Per Lead

Widen the existing Antonio Parkway from 4 to 6 lanes for 1.4 miles. The project begins ~2,000 ft south of the intersection at Covenant Hills Drive (the southern boundary of the Ladera Ranch Planned Community) and extends 900 ft south of the intersection Ortega Highway (SR 74).

Lead Agency Contact

Name Charles Baker
Agency California Department of Transportation, District 12
Phone 949-724-2252 **Fax**
email
Address 3347 Michelson Drive, Suite 100
City Irvine **State** CA **Zip** 92612

Project Location

County Orange
City San Juan Capistrano
Region
Lat / Long
Cross Streets Antonio Parkway and Ortega Highway (SR 74)
Parcel No.
Township **Range** **Section** **Base**

Proximity to:

Highways SR 74
Airports
Railways
Waterways San Juan Creek
Schools San Juan Hills HS, Oso Grande ES, Ladera Ranch
Land Use Major Arterial Highway

Project Issues Archaeologic-Historic; Biological Resources; Water Quality; Wetland/Riparian

Reviewing Agencies Resources Agency; Department of Fish and Game, Region 5; Office of Historic Preservation; Department of Parks and Recreation; Department of Water Resources; California Highway Patrol; Air Resources Board, Transportation Projects; Regional Water Quality Control Board, Region 8; Department of Toxic Substances Control; Native American Heritage Commission

Date Received 06/14/2010 **Start of Review** 06/14/2010 **End of Review** 07/14/2010

Note: Blanks in data fields result from insufficient information provided by lead agency.

Comment Letter 3
State Clearinghouse
Dated July 15, 2010

Response 1: This comment letter acknowledges that the Department has complied with the State Clearinghouse review requirements. The comment letter identifies that the Draft EA was received by the State Clearinghouse for a 30-day public review period. The State Clearinghouse submitted the Draft EA to selected state agencies for review; no comment letters were submitted to the State Clearinghouse during the review period. Therefore, no comments were received, no response is necessary.

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Linda S. Adams
Secretary for
Environmental Protection



Department of Toxic Substances Control

Maziar Movassaghi
Acting Director
5796 Corporate Avenue
Cypress, California 90630

Comment Letter 4



Arnold Schwarzenegger
Governor

July 14, 2010

Mr. Charles Baker
Caltrans Environmental Planning Branch
3347 Michelson Drive, Suite 100
Irvine, California 92612

SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT (EA) FOR ANTONIO PARKWAY WIDENING PROJECT (SCH# 2010061034)

Dear Mr. Baker:

The Department of Toxic Substances Control (DTSC) has received your submitted Notice of Availability of the Environmental Impact Report for the above-mentioned project. The following project description is stated in your document: "The Antonio Parkway widening project proposes the addition of an additional lane in each direction to the existing Antonio Parkway for an approximate 1.4-mile segment within unincorporated Orange County, California. Turn lanes would be provided at SR-74 and at future local intersections".

Based on the review of the submitted document DTSC has the following comments:

- 1) The EA should evaluate whether conditions within the project area may pose a threat to human health or the environment. Following are the databases of some of the regulatory agencies:
 - National Priorities List (NPL): A list maintained by the United States Environmental Protection Agency (U.S.EPA).
 - Envirostor (formerly CalSites): A Database primarily used by the California Department of Toxic Substances Control, accessible through DTSC's website (see below).
 - Resource Conservation and Recovery Information System (RCRIS): A database of RCRA facilities that is maintained by U.S. EPA.

1

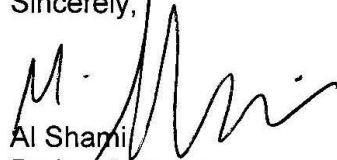
♻️ Printed on Recycled Paper

- Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS): A database of CERCLA sites that is maintained by U.S.EPA.
 - Solid Waste Information System (SWIS): A database provided by the California Integrated Waste Management Board which consists of both open as well as closed and inactive solid waste disposal facilities and transfer stations.
 - GeoTracker: A List that is maintained by Regional Water Quality Control Boards.
 - Local Counties and Cities maintain lists for hazardous substances cleanup sites and leaking underground storage tanks.
 - The United States Army Corps of Engineers, 911 Wilshire Boulevard, Los Angeles, California, 90017, (213) 452-3908, maintains a list of Formerly Used Defense Sites (FUDS).
- 2) The EA should identify the mechanism to initiate any required investigation and/or remediation for any site that may be contaminated, and the government agency to provide appropriate regulatory oversight. If necessary, DTSC would require an oversight agreement in order to review such documents.
- 3) Any environmental investigations, sampling and/or remediation for a site should be conducted under a Workplan approved and overseen by a regulatory agency that has jurisdiction to oversee hazardous substance cleanup. The findings of any investigations, including any Phase I or II Environmental Site Assessment Investigations should be summarized in the document. All sampling results in which hazardous substances were found above regulatory standards should be clearly summarized in a table. All closure, certification or remediation approval reports by regulatory agencies should be included in the EA.
- 4) If buildings, other structures, asphalt or concrete-paved surface areas are being planned to be demolished, an investigation should also be conducted for the presence of other hazardous chemicals, mercury, and asbestos containing materials (ACMs). If other hazardous chemicals, lead-based paints (LPB) or products, mercury or ACMs are identified, proper precautions should be taken during demolition activities. Additionally, the contaminants should be remediated in compliance with California environmental regulations and policies.
- 5) Future project construction may require soil excavation or filling in certain areas. Sampling may be required. If soil is contaminated, it must be properly disposed and not simply placed in another location onsite. Land Disposal Restrictions (LDRs) may be applicable to such soils. Also, if the project proposes to import
- 1
(cont.)
- 2
- 3
- 4
- 5

- soil to backfill the areas excavated, sampling should be conducted to ensure that the imported soil is free of contamination. } 5 (cont.)
- 6) Human health and the environment of sensitive receptors should be protected during any construction or demolition activities. If necessary, a health risk assessment overseen and approved by the appropriate government agency should be conducted by a qualified health risk assessor to determine if there are, have been, or will be, any releases of hazardous materials that may pose a risk to human health or the environment. } 6
- 7) If it is determined that hazardous wastes are, or will be, generated by the proposed operations, the wastes must be managed in accordance with the California Hazardous Waste Control Law (California Health and Safety Code, Division 20, Chapter 6.5) and the Hazardous Waste Control Regulations (California Code of Regulations, Title 22, Division 4.5). If it is determined that hazardous wastes will be generated, the facility should also obtain a United States Environmental Protection Agency Identification Number by contacting (800) 618-6942. Certain hazardous waste treatment processes or hazardous materials, handling, storage or uses may require authorization from the local Certified Unified Program Agency (CUPA). Information about the requirement for authorization can be obtained by contacting your local CUPA. } 7
- 8) DTSC can provide cleanup oversight through an Environmental Oversight Agreement (EOA) for government agencies that are not responsible parties, or a Voluntary Cleanup Agreement (VCA) for private parties. For additional information on the EOA or VCA, please see www.dtsc.ca.gov/SiteCleanup/Brownfields, or contact Ms. Maryam Tasnif-Abbasi, DTSC's Voluntary Cleanup Coordinator, at (714) 484-5489. } 8

If you have any questions regarding this letter, please contact me at ashami@dtsc.ca.gov, or by phone at (714) 484-5472.

Sincerely,



Al Shami
Project Manager
Brownfields and Environmental Restoration Program

cc: Governor's Office of Planning and Research
State Clearinghouse
P.O. Box 3044
Sacramento, California 95812-3044
state.clearinghouse@opr.ca.gov

Mr. Charles Baker
July 14, 2010
Page 4

CEQA Tracking Center
Department of Toxic Substances Control
Office of Environmental Planning and Analysis
P.O. Box 806
Sacramento, California 95812
ADelacr1@dtsc.ca.gov

CEQA#2962

Comment Letter 4

Department of Toxic Substances Dated July 14, 2010

Response 1: A *Phase I Environmental Site Assessment (ESA) and Initial Site Assessment* was prepared by EEI (2009) for the proposed Antonio Parkway Widening project. During the preparation of the Phase I ESA, the databases noted in the letter were reviewed and the Orange County Fire Authority, the Orange County Health Care Agency, the California Department of Toxic Substance Control, and the Regional Water Quality Control Board were consulted. . The Phase I was conducted in conformance with ASTM Designation E11527-05 and the County of Orange determined the ESA conformed with industry practices.

As noted on page 68 of the Draft EA, the Phase I ESA consisted of field observations; review of federal and State regulatory databases (for the project site and the surrounding area); and review of historical property use information (i.e., topographic maps and aerial photographs). Local regulatory agencies and other sources were contacted to identify any known or suspected contamination sites or incidents of hazardous waste storage or disposal which might have resulted in soil or groundwater contamination. The Phase I ESA includes the list of all the regulatory agencies contacted in preparation of the Phase I ESA.

Response 2: A remediation plan for the site is not anticipated to be necessary since no hazardous materials were identified as part of the ESA. As indicated in the EA, the majority of the site has already been graded as part of the initial phase of the project. However, the Standard Condition HZ-1, requires prior to the initiation of construction, the contractor develop a Health and Safety Contingency Plan (HSCP) in the event that unanticipated/unknown environmental contaminants are encountered during construction. The measure requires that the plan be developed to protect workers, safeguard the environment, and meet the requirements of Title 8 of the California Code of Regulations (CCR), "General Industry Safety Orders – Control of Hazardous Substances". The HSCP shall be prepared as a supplement to the Contractor's Site-Specific Health and Safety Plan, which shall be prepared to meet the requirements of CCR Title 8, "Construction Safety Orders.

Response 3: As indicated in Response 1, above, a Phase I ESA and ISA was prepared in conjunction with the preparation of this environmental document. No hazardous substances were identified within the project right-of-way or temporary construction easements.

Response 4: Minimal demolition would be required for the proposed roadway widening. As discussed on page 70 in the EA, exposure to ACMs, lead-containing materials, radon gas, and aurally deposited lead is not anticipated because the initial phase of the project was constructed in the mid-1990s. A significant health risk to sensitive receptors is not anticipated. Additionally, compliance with HZ-1 would ensure that the proposed project would comply with all applicable federal, State, and local regulations should unanticipated contaminants be encountered.

Response 5: Encountering soil contamination is not anticipated during construction. Based on the ESA, no evidence of recognized environmental conditions was

identified for the project site. The HSCP would identify the required actions should unanticipated contaminated soil were encountered during construction.

Response 6: The Department recognizes the need to ensure that all construction activities protect the health of workers and other sensitive receptors. The ESA did not identify any hazards that would pose a health risk. The principal staff person that conducted the ESA for the project is a Registered Environmental Assessor, licensed Professional Geologist, and Certified Professional Geologist.

Response 7: The construction will be limited to routine roadway widening activities and would not require authorization from a Certified Unified Program Agency.

Response 8: The contact information has been noted should there be unforeseen circumstances that would require the involvement of the Department of Toxic Substance Control.

DEPARTMENT OF TRANSPORTATION

3347 MICHELSON DRIVE, SUITE 100
IRVINE, CA 92612-1692
PHONE (949) 724-2252
FAX (949) 724-2256



*Flex your power!
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March 26, 2010

Karen A. Goebel
Assistant Field Supervisor
U.S. Fish and Wildlife Service
Ecological Services
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road, Suite 101
Carlsbad, CA 92011
Attn: Ken Corey

Reference: Southern Sub-region Habitat Conservation Plan;
Incidental Take Permit TE 144140-0
Rancho Mission Viejo Covered Activities

Reference: Antonio Parkway Widening Improvements

Dear Ms. Goebel:

The California Department of Transportation (hereafter referred to as "The Department") is seeking to initiate Section 7 Consultations with the U.S. Fish and Wildlife Service (USFWS) in regards to the Antonio Parkway Widening Project, located in southern Orange County, California. The Department is acting as the lead Federal agency in this process, as assigned by the Federal Highway Administration (FHWA) in accordance with the terms of the *Memorandum of Understanding (MOU) between the Federal Highway Administration and the California Department of Transportation Concerning the State of California's Participation in the Surface Transportation Project Delivery Pilot Program*, which took effect in July of 2007. Previously, the Antonio Parkway project was addressed as a Covered Activity under the Southern Sub-region Habitat Conservation Plan (Southern HCP) and related Rancho Mission Viejo (RMV) Incidental Take Permit TE 144140-0, and was also referenced in the Draft Joint Programmatic Environmental Impact Report/Environmental Impact Statement that was published in July of 2006. The County of Orange is the proponent of the Antonio Parkway project.

In order for the Department to fulfill its obligations under the Federal Endangered Species Act and Section 7 Consultation regarding this proposed project please see the attached Natural Environment Study. This study documents the consistency of the project, as engineered, with the project described in the Draft Southern Sub-region NCCP/MSAA/HCP and Joint Programmatic EIR/EIS, the effects of which were analyzed by the USFWS in the Biological Opinion/Conference Opinion 1-6-07-F-812.8. Please confirm in writing that no further action regarding this project relative to the Federal Endangered Species Act will be necessary.

"Caltrans improves mobility across California"

Should you have any questions regarding this correspondence, please feel free to contact Charles Baker of my staff at (949)724-2252.

Sincerely



Sylvia Vega
Deputy District Director
Division of Environmental Analysis
California Department of Transportation, District 12

Attachment – Antonio Parkway Widening Project Natural Environment Study

Cc: Harry Persaud, Orange County
Laura Coley Eisenberg, RMV

"Caltrans improves mobility across California"



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road, Suite 101
Carlsbad, California 92011



In Reply Refer To:
FWS-OR-10B0589-10F0778

JUN 16 2010

Mr. Charles Baker
Senior Environmental Planner
California Department of Transportation
District 12
3347 Michelson Drive, Suite 100
Irvine, California 92612-8894

Subject: Formal Section 7 Consultation for the Antonio Parkway Widening Project, Orange County, California

Dear Mr. Baker:

This document transmits our biological opinion based on our review of the proposed Antonio Parkway Widening Project and its potential effects on the federally endangered arroyo toad [*Anaxyrus* (= *Bufo*) *californicus* "toad"] and least Bell's vireo (*Vireo bellii pusillus*, "vireo"), in accordance with section 7 of the Endangered Species Act of 1973 (Act), as amended (16 U.S.C. 1531 *et seq.*). The project is receiving Federal funding through the Federal Highway Administration (FHWA), and Caltrans has assumed FHWA's responsibilities under the Act for this consultation in accordance with Section 6005 the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) 2005, as described in the National Environmental Policy Act (NEPA) Delegation Pilot Program Memorandum of Understanding between FHWA and Caltrans (effective July 1, 2007) and codified in 23USC327(a)(2)(A). We initiated consultation to address the effects of the proposed project on the vireo and toad on March 29, 2010, the date we received your request.

On January 10, 2007, we issued a section 10(a)(1)(B) permit for the Orange County Southern Subregion Habitat Conservation Plan (HCP). The HCP establishes a multiple species conservation program to minimize and mitigate habitat loss and the incidental take of covered species in association with activities covered under the permit. The proposed project is a covered activity located within the plan area boundary of the HCP on Rancho Mission Viejo lands. Within this plan area boundary, take of federally listed and non-listed covered species in association with covered activities is addressed under the HCP. Caltrans is not a permittee under the HCP; thus, to extend the incidental take coverage provided by the HCP to Caltrans, the proposed action must be consistent with the HCP and its associated implementation agreement and permit.



This biological opinion is based on information provided in 1) *Antonio Parkway Widening Project Natural Environmental Study, County of Orange, California* (NES) (Caltrans, 2010); 2) *Draft Biological Resources Construction Plan Antonio Parkway Widening Project* (Draft BRCP) (Glenn Lukos Associates, Inc., 2010); and 3) other information available in our files. The complete project file addressing this consultation is maintained at the Carlsbad Fish and Wildlife Office (CFWO).

Implementation of the proposed project will result in widening of Antonio Parkway and La Pata Avenue along an approximately 1.4-mile segment extending from south of Ladera Ranch to south of State Route 74. The widening will allow for 3 lanes of traffic in each direction, with a 14-foot-wide raised median, 8-foot-wide bikeway/shoulders, and a 6-foot-wide curb or 5-foot-wide meandering sidewalks on both sides of the street. In addition, a new 776-foot-long and 40.25-foot-wide cast-in-place, pre-stressed, continuous concrete box girder bridge will be constructed over San Juan Creek that will match the existing bridge superstructure.

The project footprint comprises approximately 61.6 acres, including 42.7 acres of permanent impact area and 18.9 acres of temporary impact area for bridge expansion, remedial grading, staging, and temporary construction easement areas. Of this, approximately 26.9 acres consists of natural vegetation communities, including coastal sage scrub (9.6 acres), grassland (14.4 acres), oak forest (0.2 acre) and riparian (2.7 acres), and the remaining 34.7 acres consists of non-natural land covers, including agriculture (20.1 acres) and developed lands (14.6 acres). There is suitable habitat for vireos and toads within the project impact area, and there are numerous data records for these species both upstream and downstream of the project within San Juan Creek. Focused surveys were not conducted for vireos and toads because they are covered species under the HCP.

The HCP requires that permittees submit a Biological Resources Construction Plan (BRCP) for projects with the potential to affect covered species. The BRCP describes the anticipated impacts associated with the proposed project and the measures that will be taken to ensure consistency with the HCP. We received the Draft BRCP, dated June 2010, for the proposed project via electronic correspondence from Caltrans on June 8, 2010, and have reviewed the document for consistency with the HCP. The Draft BRCP for the proposed project details the measures that will be implemented, consistent with the requirements of the HCP, including placement of construction fencing, toad exclusion fencing, and permanent wildlife fencing, shielding of lights, exclusion of invasive species from planting palates, preconstruction surveys, monitoring, and restoration of temporary impact areas.

Based on our review of the information provided to us, we have determined that the proposed project is consistent with the requirements of the HCP. The status of the vireo and toad and the effects of implementing the HCP were previously addressed in our biological opinion for the HCP dated January 10, 2007. In the biological opinion for the HCP, we concluded that the level of anticipated take in the plan area for the HCP was not likely to result in jeopardy to the vireo or toad. Given that the proposed action is consistent with the HCP, we do not anticipate any

adverse effects to the vireo or toad that were not previously evaluated in the biological opinion for the HCP. No incidental take of vireo or toad beyond that anticipated in the biological opinion for the HCP will occur. Therefore, it is our conclusion that implementation of the proposed project will not result in jeopardy to the vireo or toad. By this consultation, we are extending to Caltrans the take coverage for vireo and toad already provided to Rancho Mission Viejo under their incidental take permit for the HCP. Extension of take coverage to Caltrans under the HCP is limited to the proposed project as described above.

This concludes formal consultation on the proposed action. As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: 1) the amount or extent of incidental take is exceeded; 2) new information reveals effects of the proposed action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; 3) the agency action is subsequently modified in a manner that causes an effect to listed species or critical habitat that was not considered in this opinion; or 4) a new species is listed or critical habitat is designated that may be affected by the proposed action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

This document does not authorize take under the Migratory Bird Treaty Act of 1918, as amended (16 U.S.C. §§ 703-712) (MBTA). In order to avoid violation of the MBTA, project proponents will remove vegetation outside of the February 15 – September 1 bird breeding season to the maximum extent practicable. If vegetation removal is necessary during the breeding season, project proponents will implement nesting bird surveys and avoidance as detailed in the Draft BRCP.

We appreciate your coordination on this project. Should you have any questions regarding this biological opinion, please contact Sally Brown of my staff at (760) 431-9440, extension 278.

Sincerely,



for

Jim A. Bartel
Field Supervisor

cc:

Laura Eisenberg, Rancho Mission Viejo, San Juan Capistrano, CA 92693
Harry Persaud, County of Orange, Santa Ana, CA 92703

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**OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION**

P.O. BOX 942896
SACRAMENTO, CA 94296-0001
(916) 653-6624 Fax: (916) 653-9824
calshpo@ohp.parks.ca.gov
www.ohp.parks.ca.gov



April 19, 2010

In Reply Refer To: FHWA100405A

Charles Baker
Department of Transportation
District 12
3347 Michelson Drive, Suite 100
Irvine, CA 92612-1692

Re: Determination of National Register of Historic Places Eligibility and Subsequent Finding of No Historic Properties Affected for Proposed Widening of Antonio Parkway, Orange County, EA 965100

Dear Mr. Baker:

Thank you for seeking my consultation regarding the above noted undertaking in accordance with the *Programmatic Agreement (PA) Among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as it Pertains to the Administration of the Federal-Aid Highway Program in California*. Pursuant to Stipulation VIII of the PA, the California Department of Transportation (Caltrans) has determined the Area of Potential Effects (APE) and has completed identification and evaluation of historic properties within the APE. You are requesting my concurrence, pursuant to Stipulation VIII.C.5 of the PA, on your determination of eligibility, for the National Register of Historic Places (NRHP), of three historic properties identified within the APE. In addition to your letter of April 1, 2010, you have submitted the following documents in support of this undertaking:

- *Historic Property Survey Report County of Orange, STPL-5955 (071) EA: 965100 (C. R. Demcak, Archaeological Resource Management Corp.: February 3, 2010)*
- *Report of Archaeological Resources Survey for the Antonio Parkway Bridge Widening Project, South Orange, County, California (C. R. Demcak, Archaeological Resource Management Corp.: March 8, 2010).*
- *Draft Report on Extended Phase One Archaeological Investigation at Four Sites (CA-ORA-26, CA-ORA-656, CA-ORA-1102, CA-ORA-1103) Along Ortega Highway (07-ORA-74 P.M. 1.7/5.3) Orange County, California (J.F. Romani, Caltrans District 7: June 1986)*

- *Addendum Archaeological Survey and Extended Phase I Report for Sites CA-ORA-26, CA-ORA-656, CA-ORA-1102, CA-ORA-1103) Along Ortega Highway (07-ORA-74 P.M. 1.7/5.3) Orange County, California* (G. Huey, Caltrans District 7: May 1987)

- *Extended Phase I Investigations for the Foothill Transportation Corridor Orange County, California* (J.F. Romani, Greenwood and Associates, January 1997)

- *Archaeological Investigations for the Antonio Parkway Extension, OSO Parkway to Ortega Highway, South Orange County, California* (C.R. Demcak and M. Velechovsky, Archaeological Resource Management Corporation: November 4, 1996)

As documented in the reports noted above, Caltrans has identified archeological sites as being located within the project APE. Site CA-ORA-26 has previously been determined to be ineligible for the National Register of Historic Places (NRHP) with SHPO concurrence dated August 12, 1987, however another locus of the site has been located since concurrence for the CA-ORA-26's eligibility determination. Ca-ORA-902 and CA-ORA-881 were previously recorded and impacted in the non-federal action for the original construction of Antonio Parkway, resulting in a lack of integrity. Both sites were previously determined not significant under CEQA for the previous non-federally funded undertaking.

The NRHP eligibility determinations that Caltrans is requesting my concurrence on are not eligible for the three archaeological sites, including CA-ORA-26. Because of the finding of not eligible, no sites are located within the APE; therefore Caltrans has determined a finding of No Historic Properties Affected is appropriate for this undertaking, the widening of Antonio Parkway. Based on my review of your letter and supporting documentation, I have the following comments:

1) I concur that CA-ORA-26 is still not eligible for the NRHP in spite of the additional locus of the site that was tested and lacked subsurface deposits.

2) I further concur that CA-ORA-881 and CA-ORA-902, both lithic scatters, are not eligible for the NRHP. Both sites lack subsurface deposits and diagnostic artifacts, including datable organics, to provide more information to broader research questions in addition to a lack of integrity.

3) Therefore, I concur with your finding of No Historic Properties Affected for the proposed widening of Antonio Parkway.

If you require further information, please contact Trevor Pratt of my staff, at phone 916-651-0831 or email tpratt@parks.ca.gov.

Sincerely,



Milford Wayne Donaldson, FAIA
State Historic Preservation Officer



U.S. Department
of Transportation
**Federal Highway
Administration**

**Federal Highway Administration
California Division**

April 26, 2010

650 Capitol Mall, Suite 4-100
Sacramento, CA 95814
(916) 498-5001
(916) 498-5008 (fax)

In Reply Refer To:
HDA-CA
EA 965100
RTIP No. ORA2A0803

Ms. Cindy Quon
California Department of Transportation
District 12
3337 Michelson Drive, Suite 380
Irvine, CA 92612-8894

Attention: Paul Chang, Caltrans, Environmental Engineering Branch

Dear Mr. Chang:

SUBJECT: Project Level Conformity Determination for Antonio Parkway Widening
Improvement Project

On April 21, 2010, the California Department of Transportation (Caltrans) submitted to the Federal Highway Administration (FHWA) a request for the project-level conformity determination for the Antonio Parkway Widening Improvement Project in Orange County pursuant to 23 U.S.C. 327(a)(2)(B)(ii)(1). The project is in an area that is designated Nonattainment for Ozone, Particulate Matter (PM₁₀), and Fine Particle Particulate Matter (PM_{2.5}); and Attainment/Maintenance for Carbon Monoxide (CO) and Nitrogen Dioxide (NO₂).

The project-level conformity analysis submitted by Caltrans indicates that the project-level transportation conformity requirements of 40 C.F.R. Part 93 have been met. The project is included in the Southern California Association of Government's (SCAG) currently conforming *2008 Regional Transportation Plan (RTP)* and the *2008 Regional Transportation Improvement Program (RTIP)*. The conformity determinations for the RTP Amendment No. 2 and RTIP Amendment No. 24 were approved by FHWA and the Federal Transit Administration (FTA) on January 22, 2010. The design concept and scope of the preferred alternative have not changed significantly from those assumed in the regional emissions analysis.

Based on the information provided, FHWA finds that the project-level conformity re-determination for the Antonio Parkway Widening Improvement Project in Orange County conforms to the State Implementation Plan (SIP) in accordance with 40 C.F.R. Part 93.



If you have any questions pertaining to this conformity finding, please contact Stew Sonnenberg, FHWA Air Quality Specialist, at (916) 498-5889.

Sincerely,

A handwritten signature in black ink, appearing to read 'AKMAM', with a stylized flourish at the end.

For
Vincent Mammano
Acting Division Administrator

Chapter 4—List of Preparers

CALIFORNIA DEPARTMENT OF TRANSPORTATION

Deputy District Director, Planning and Local Assistance..... Ryan Chamberlain
Chief, Local Assistance Branch..... Jim Kaufman
Deputy District Director, Environmental Analysis Sylvia Vega
Senior Environmental Planner..... Charles Baker
District Local Assistance Engineer Monroe Johnson

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Division Manager..... Harry Persaud

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Ecologist..... Amber Oneal
GIS/Graphic..... Johnnie Garcia
GIS/Graphics Kimberly Davis
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Technical Editor..... Casey Malloy
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AUSTIN-FOUST ASSOCIATES, INC.

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Senior Zoologist Phil Behrends

GLENN LUKOS & ASSOCIATES

Sr. Biologist Tony Bomkamp

EEI

Principal Geologist..... Bernard Sentian

GEO-SYNTEC CONSULTANTS

Sr. Water Resources Engineer Lisa Austin

GLENN LUKOS & ASSOCIATES

Sr. Biologist Tony Bomkamp

MESTRE GREVE ASSOCIATES

Professional Engineer..... Fred Greve
Professional Engineer..... Mathew B. Jones
..... Tanya Moon

PACIFIC ADVANCED CIVIL ENGINEERING, INC.

Sr. Vice President, Stormwater Division Bruce M. Phillips
..... Jose Cruz

LAND CONCERN

Principal Landscape Architect Michael J. Sweeney, ASLA

Chapter 5—Distribution List

The draft Environmental Assessment was distributed to the following agencies on compact disk (CD). Paper copies and CDs were provided to the public libraries.

FEDERAL AGENCIES

U.S. Army Corps of Engineers
Project Planning Branch
915 Wilshire Boulevard
Los Angeles, CA 90017-3401

U.S. Fish and Wildlife Service
6010 Hidden Valley Road, Suite 101
Carlsbad, CA 92008
Attn: Jim Bartel, Field Supervisor

STATE AGENCIES

State Clearinghouse
Office of Planning and Research
1400 10th Street
Sacramento, CA 95814-5502

California Department of Fish and Game
4949 View Ridge Avenue
San Diego, CA 92123

California Department of Parks and Recreation
Office of Historic Preservation
1416 9th Street, Room 1442
Sacramento, CA 95814

California Highway Patrol
32951 Camino Capistrano
San Juan Capistrano 92675-4597

San Diego Regional Water Quality Control Board
9174 Sky Park Court, Suite 100
San Diego, CA. 92123-4340

Native American Heritage Commission
915 Capitol Mall, Room 364
Sacramento, CA 95814

LOCAL/REGIONAL AGENCIES

South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

County of Orange
Planning Department
300 North Flower Street
Santa Ana, CA 92703-5000

Orange County Transportation Authority
550 S. Main St.
P.O. Box 14184
Orange, CA 92863-1584

City of San Juan Capistrano
Community Development Director
32400 Paseo Adelanto
San Juan Capistrano, CA 92675

City of Mission Viejo
Community Development Director
200 Civic Center
Mission Viejo, CA 92691

Fire Chief Keith Richter
Orange County Fire Authority
1 Fire Authority Road
Irvine, CA 92602-0125

Sheriff-Coroner Sandra Hutchens
Orange County Sheriff's Department
550 N. Flower Street
Santa Ana, CA 92703

LIBRARIES

Ladera Ranch Library
29551 Sienna Parkway
Mission Viejo, CA 92694-0789

San Juan Capistrano Regional Library
31495 El Camino Real
San Juan Capistrano, CA 92675

Mission Viejo Library
100 Civic Center
Mission Viejo, CA 92691

Notices of availability were sent to elected officials, service providers, utility companies and adjacent property owners within 500 feet of the project limits. The Notice of Availability provided information on the location of the document or the how download the document from the County of Orange website.

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Rancho Santa Margarita, CA 92688

Representative John Campbell
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Newport Beach, CA 92660

Representative Gary Miller
42nd District
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Mission Viejo, CA 92691

Senator Barbara Boxer
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Senator Dianne Feinstein
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San Diego, CA 92101

Assemblyman Jeff Miller
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Mission Viejo, CA 92692

Assemblywoman Diane Harkey
29122 Rancho Viejo Road
San Juan Capistrano, CA 92675

Assemblywoman Mimi Walters
33rd District
24031 El Toro Rd., Suite 210
Laguna Hills, CA 92653

Assemblyman Mark Wyland
38th District
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County of Orange
Board of Supervisors
Janet Nguyen, Vice Chair – District 1
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Board of Supervisors
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City of San Juan Capistrano
32400 Paseo Adelanto
San Juan Capistrano, CA 92675

Mayor Pro Tem Laura Freese
City of San Juan Capistrano
32400 Paseo Adelanto
San Juan Capistrano, CA 92675

Council Member Sam Alleveto
City of San Juan Capistrano
32400 Paseo Adelanto
San Juan Capistrano, CA 92675

Council Member Thomas Hribar
City of San Juan Capistrano
32400 Paseo Adelanto
San Juan Capistrano, CA 92675

Council Member Mark Nielsen
City of San Juan Capistrano
32400 Paseo Adelanto
San Juan Capistrano, CA 92675

Mayor Frank Ury
City of Mission Viejo
200 Civic Center
Mission Viejo, CA 92691

Mayor Pro Tem Lance MacLean
City of Mission Viejo
200 Civic Center
Mission Viejo, CA 92691

Council Member Patricia Kelley
City of Mission Viejo
200 Civic Center
Mission Viejo, CA 92691

Council Member John Paul Ledesma
City of Mission Viejo
200 Civic Center
Mission Viejo, CA 92691

Council Member Cathy Schlicht
City of Mission Viejo
200 Civic Center
Mission Viejo, CA 92691

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Rancho Santa Margarita, CA 92688
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Southern California Gas Co
1 Liberty
Aliso Viejo, CA 92656-3830
Attention: Mr. Myron Diekmann

San Diego Gas & Electric
662 Camino De Las Mares
San Clemente, Ca. 92673
Attention: Ms. Patti Good

AT&T
3939 E. Coronado Street
Anaheim, CA 92807
Attention: Mr. Vic Perez

Santa Margarita Water District
26111 Antonio Parkway
Las Flores, CA 92688
Attention: Dan Ferons

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Department
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San Juan Capistrano, CA 92675
Attention: Eric Bauman

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San Juan Capistrano, CA 92675

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LARMAC
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APPENDIX A

RESOURCES EVALUATED RELATIVE TO THE REQUIREMENTS OF SECTION 4(F)

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RESOURCES EVALUATED RELATIVE TO THE REQUIREMENTS OF SECTION 4(f)

The environmental review, consultation, and any other action required in accordance with applicable Federal laws for this project is being, or has been, carried-out by Caltrans under its assumption of responsibility pursuant to 23 U.S.C. 327.

INTRODUCTION

Section 4(f) of the Department of Transportation Act of 1966, codified in federal law at 49 U.S.C. 303, declares that “it is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites.”

Section 4(f) specifies that the Secretary [of Transportation] may approve a transportation program or project . . . requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance, or land of an historic site of national, State, or local significance (as determined by the federal, state, or local officials having jurisdiction over the park, area, refuge, or site) only if:

- there is no prudent and feasible alternative to using that land; and
- the program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.

Section 4(f) further requires consultation with the Department of the Interior and, as appropriate, the involved offices of the Departments of Agriculture and Housing and Urban Development in developing transportation projects and programs that use lands protected by Section 4(f). If historic sites are involved, then coordination with the State Historic Preservation Officer is also needed.

DESCRIPTION OF PROPOSED PROJECT

Build Alternative “Proposed Project” (Preferred Alternative)

The Antonio Parkway widening project proposes adding an additional lane in each direction to the existing Antonio Parkway for an approximate 1.4-mile segment within unincorporated Orange County, California. The project limits begin at approximately 2,000 feet south of the intersection at Covenant Hills Drive (the southern boundary of the Ladera Ranch Planned Community) and extend approximately 7,900 feet (1.4 miles) south. This would extend the improvements approximately 900 feet south of the intersection with State Route (SR) 74, which is known locally as Ortega Highway. South of SR-74, Antonio Parkway changes name and is known as La Pata Avenue. Extending the improvements through the intersection is required to facilitate traffic operations and to provide for a safe transition to the existing lane configuration on La Pata Avenue. Turn lanes would be provided at SR-74 and at future local intersections. The improvements would utilize the existing roadway centerline, profile, and standard super-elevation rates.

The project is in the *2008 Regional Transportation Plan* (2008 RTP) (Amendment 2) and the *2008 Regional Transportation Improvement Program* (2008 RTIP) (Amendment #08-24), approved on December 3, 2009. The 2008 RTIP identifies the project as follows: “Build out Antonio Parkway to its Master Plan of Arterial Highways Designation width between Ladera planned Community and Ortega Highway by widening the road from four to six lanes. The Project will include widening Antonio Parkway by one lane in each direction”.

Project implementation is projected to start in 2011 and take approximately two years to complete.

No Build (No Action) Alternative

The No Build Alternative is considered the base case scenario and proposes that no improvements be implemented at this time. Antonio Parkway would remain as a four-lane roadway south of the Ladera Ranch Planned Community boundary.

Purpose and Need

The purpose of the proposed project is to accomplish the following specific objectives:

- To provide sufficient transportation infrastructure to meet the long-term travel demand for southeastern Orange County.
- To provide improvements consistent with planning programs, including the Orange County *Master Plan of Arterial Highways* and the County of Orange *Transportation Element*.
- To provide improvements to satisfy long term transportation demand planning for the region.

The project’s need has been established through a number of previous studies. In 1995, the County of Orange conducted studies to establish a precise alignment and capacity requirements for Antonio Parkway. To serve the long-term travel demand based on regional growth projections, Antonio Parkway has been designated as a major arterial highway, which is a 6-lane, divided roadway with 120 feet of right-of-way, on the local and regional planning documents. This need has been confirmed through subsequent studies conducted for the Ranch Plan, including FEIR 589.

The project description, including the purpose and need for the project, is discussed in greater detail in Chapter 1 of the Environmental Assessment.

DESCRIPTION OF PROPERTIES EVALUATED RELATIVE TO THE REQUIREMENTS OF SECTION 4(F)

Currently, there are no resources within the project study area that would currently qualify as a Section 4(f) resource. However, there are planned and potential facilities in the area that would ultimately be considered Section 4(f) resources. In addition, the Rancho Mission Viejo Riding Park at San Juan Capistrano is immediately adjacent to the project limits. Therefore, they have been evaluated relative to the requirements of Section 4(f). The resources analyzed in this evaluation include:

- The Rancho Mission Viejo Riding Park at San Juan Capistrano,
- The Antonio Parkway, Class II Bikeway,
- The proposed Class I San Juan Creek Bike Trail, and
- The proposed San Juan Creek Regional Riding and Hiking Trail.

There are no designated wildlife refuges or historic resources in or adjacent to the project study area. The Archaeological Survey Report identified three archaeological sites in or adjacent to the Area of Potential Effect (APE). However, these sites were determined Section 4(f) does not apply to archaeological resources that are important chiefly because of what can be learned from data recovery and have minimal value for preservation in place (23 CFR 774.13[b][1]). The Department determines this through coordination with the State Historic Preservation Officer and the Advisory Council on Historic Preservation.

The potential resources would be the same for both the Build Alternative and the No Build Alternative. However, the No Build Alternative would not have any direct impacts on these resources

Rancho Mission Viejo Riding Park at San Juan Capistrano

The Rancho Mission Viejo Riding Park at San Juan Capistrano is located at 29500 Ortega Highway on the southwestern corner of La Pata Avenue and SR-74. The current Riding Park is approximately 70 acres and contains fenced pastures and an equestrian exhibition area. The facility has hosted major equestrian competitions and the Rancho Mission Viejo rodeo, which is open to the public. This facility was under private ownership (Rancho Mission Viejo, LLC) until January 2010, when this property, as well as approximately 61.5 acres of adjacent open space land, was transferred to the City of San Juan Capistrano. The use of the site will remain the same. Figure A-1 depicts the area transferred to the City of San Juan Capistrano.

Antonio Parkway, Class II Bikeway

The *Transportation Element (Master Plan of Bikeways Component)* of the *County of Orange General Plan* has designated a Class II bikeway on Antonio Parkway. A Class II facility is in a typical highway shoulder that is signed and marked for bike lanes with no vehicle parking allowed. The County of Orange standards identify that the roadway shoulder should be eight feet wide for major arterial highways and ten feet wide for a primary arterial highway. The bikeway has been constructed north of the project limits. The facility does not exist within the project limits; however, the proposed improvements would provide a connection to the existing bikeway.

Proposed Class I San Juan Creek Bike Trail

The County of Orange General Plan has designated a Class I trail (off-road) on the *Master Plan of Bikeways* as a proposed facility parallel to San Juan Creek on its north side. The San Juan Creek Bikeway is also on the Orange County Transportation Authority's *Strategic Plan* for regional bikeways. The San Juan Creek Bike Path is proposed to follow San Juan Creek and connect Caspers Wilderness Park to Doheny State Beach. It is described as a "mountains-to-sea" bikeway. The bike trail is conceptual in nature. No steps toward implementation have been taken

within the unincorporated area of Orange County. There are no easements granted for implementation of the facilities. Therefore, the provisions of Section 4(f) are not triggered.

Proposed San Juan Creek Regional Riding and Hiking Trail

The *Master Plan of Riding and Hiking Trails*, a component of the County of Orange General Plan, has designated a riding and hiking trail on the south side of San Juan Creek. The San Juan Creek Trail is proposed to commence at the Los Piños Trail, San Juan Trail and Sitton Peak Trail at San Juan Hot Springs. The trail would travel west for approximately one-half mile and extend along San Juan Creek through Ronald W. Caspers Regional Park. The trail would continue in a southerly direction running parallel to Ortega Highway until it reaches Antonio Parkway, at which point it crosses under Antonio Parkway and then under Ortega Highway. The trail would travel in a southwesterly direction and enter the City of San Juan Capistrano. The trail would continue to parallel San Juan Creek. At the La Novia Bridge, the trail would cross at-grade and head south until it crosses under the Interstate (I) 5 Freeway. It would then head southwest under the Camino Capistrano Bridge and proceed over the Atchison, Topeka & Santa Fe Railroad tracks. The trail would head south and cross to the east side of San Juan Creek at Descanso Park. The trail would continue downstream on the east levee of the creek to Pacific Coast Highway near Doheny State Beach. The portion that runs through Caspers Regional Park is only accessible to hikers and equestrians. The trail is close to several staging areas and would connect to many trails and parks.

The completed trail would be approximately 15 miles long, with 12 miles being located within unincorporated Orange County and three miles within the City of San Juan Capistrano. Currently, the trail does not exist in the unincorporated area and approximately 2.5 miles of the trail is complete in the City territory. Within unincorporated Orange County, the trail is conceptual in nature. No steps toward implementation have been taken. There are no easements granted for implementation of the facilities. Therefore, the provisions of Section 4(f) are not triggered.

IMPACTS ON SECTION 4(f) PROPERTIES

Build Alternative “Proposed Project” (Preferred Alternative)

Rancho Mission Viejo Riding Park at San Juan Capistrano

As indicated above, the conveyance of the Rancho Mission Viejo Riding Park at San Juan Capistrano to the City of San Juan Capistrano occurred in January 2010. All necessary roadway right-of-way for La Pata Avenue was transferred to the County of Orange prior to the closure of escrow. The Antonio Parkway roadway widening would not adversely affect the ongoing recreational activities at the park. As shown in Figure A-1, the layout of the park has an internal roadway surrounding the field where recreational activities take place. This internal roadway would not be affected by the project. The proposed improvements would not extend as far south as the park entrance. Therefore, the active park area would remain undisturbed. The proposed improvements would improve access to the park from areas to the north by improving circulation at the Antonio Parkway/La Pata Avenue/SR-74 intersection.

The *Noise Study Report* prepared for this project evaluates the potential for noise impacts on the park. The study determines that the widening of La Pata Avenue would not result in noise levels that exceed the noise abatement criteria at the park.

The improvements would not adversely affect other characteristics of the park. There would be a retaining wall constructed along the west side of La Pata Avenue, adjacent to the Rancho Mission Viejo Riding Park at San Juan Capistrano. The wall would be visible for approximately 140 linear feet. The retaining wall would be visually consistent with the existing retaining wall at the base of slope (within the park). However, it would not be as prominent because the exposed face of the existing wall is approximately eight to ten feet tall, whereas the only four to five feet of the proposed wall would be visible.

The improvements would not require the removal of mature vegetation at or surrounding the park. There is limited vegetation along the roadway in the vicinity of the park. Therefore, there would not be a substantial change in the visual characteristics of the park. The improvements would not change alignment of the existing road or the characteristics of the type of trips using the roadway. It would also not change the area served by the roadway. The drainage from the roadway would not enter the park; therefore, there would not be water quality impacts on the park. The project would not have secondary impacts to the park. The overall function of the park would not change due to the widening of the 900-foot segment of La Pata Avenue south of the SR-74 intersection.

The proposed project would not cause substantial proximity impacts (constructive use) on the Rancho Mission Viejo Riding Park at San Juan Capistrano because the widening project would not substantially impair the activities, features, or attributes of the park.

Antonio Parkway, Class II Bikeway

The proposed improvements would not have any adverse effects on the existing Class II bikeway on Antonio Parkway north of the project limits. The project would meet the same County design standards that have been implemented with the existing bikeway. Since no modifications to the existing facility are required, construction would occur south the existing bikeway. Short-term impacts to the existing bikeway (the Section 4(f) resource) are not anticipated. Though it is not an official bikeway, bicyclists that choose to ride on the roadway would experience the construction zone as they leave the existing bikeway. However, since there is no bikeway in this location, it is not considered a Section 4(f) resource. The Traffic Management Plan would identify signage and other measures to minimize conflicts associated with construction activities. Long-term the project would have a beneficial effect because it would provide for a continuation of the bikeway. The proposed extension of the existing bikeway may encourage ridership because having a designated lane for bicyclists enhances safety. In addition, when the planned bikeway network is constructed in the surrounding area, the Antonio Parkway Class II bikeway would provide a connection to the proposed regional bike trail parallel to San Juan Creek, thus enhancing connectivity to other trails in the region.

Proposed Class I San Juan Creek Bike Trail

The project would not have any impacts on the proposed Class I San Juan Creek. As indicated above, at this time the trail would not be considered a Section 4(f) Resource because it does not exist. The bike trail would be developed in conjunction with the adjacent land use. Once completed, the bike trail would be dedicated to the County of Orange. At that point, it would become a Section 4(f) resource.

The Antonio Parkway widening is anticipated to be constructed prior to the bike trail. The bridge design accommodates the proposed Class I bike trail parallel to and on the north side of San Juan Creek. Preliminary concepts are that, under the bridge, the bike trail would be accommodated on the Santa Margarita Water District's maintenance road on the north side of San Juan Creek, consistent with the *Master Plan of Bikeways*. The trail would be constructed in conjunction with the adjacent land use. The specifics of the trail implementation would be determined at the time the adjacent land use is constructed.

Proposed San Juan Creek Regional Riding and Hiking Trail

Similar to the bike trail, the San Juan Creek Regional Riding and Hiking Trail does not exist. Therefore, it would not be considered a Section 4(f) Resource. The bridge design provides a maintenance road under the bridge. The bench under the bridge for the maintenance road is being designed in a manner that would allow both the maintenance road and the future construction of the trail on the south side of San Juan Creek, consistent with the *Master Plan of Regional Riding and Hiking Trails*.

No Build (No Action) Alternative

The No Build Alternative would not have direct impacts on any of the resources evaluated relative to the requirements of Section 4(f). There would be no modifications to the roadway that would affect the Rancho Mission Viejo Riding Park at San Juan Capistrano. The No Build Alternative would not provide for the future implementation of the bike trail and riding and hiking trail parallel to San Juan Creek; however, it would not preclude or obstruct the future implementation of the trails in conjunction with the land use development.

Though not a direct impact, the No Build Alternative would not provide for the extension of the Class II bikeway that currently exists north of the project limits and is designated on the *Orange County General Plan* as extending south through the project limits. This would be an adverse impact because it would leave a gap in the County's planned bicycle network.

AVOIDANCE ALTERNATIVES

No impacts were identified. Therefore, no avoidance alternative is required.

MEASURES TO MINIMIZE HARM

No impacts were identified. Therefore, no minimization measures are required.

COORDINATION

During the preparation of the conceptual plans, the County of Orange evaluated the design consistent with their recreational planning efforts, including the *Master Plan of Bikeways* and the *Master Plan of Riding and Hiking Trails*. The Antonio Parkway project was found to be consistent with each of these documents. The project would implement the Class II bikeway and provide the opportunity to implement the Class I bike trail and the riding and hiking trail at such times as the adjacent land development is implemented.

The City of San Juan Capistrano has been aware of the Antonio Parkway/La Pata Avenue designation on Orange County's Master Plan of Arterial Highways map, which would necessitate the widening of the roadway. To accommodate the development of the roadway to its ultimate width, the required roadway right-of-way is to be transferred to the County of Orange prior to the City's close of escrow on Riding Park property.

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Rancho Mission Viejo Riding Park at San Juan Capistrano

Figure A-1

Antonio Parkway Widening

APPENDIX B
TITLE VI POLICY STATEMENT

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DEPARTMENT OF TRANSPORTATION

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*Flex your power!
Be energy efficient!*

August 25, 2009

**TITLE VI
POLICY STATEMENT**

The California State Department of Transportation under Title VI of the Civil Rights Act of 1964 and related statutes, ensures that no person in the State of California shall, on the grounds of race, color, national origin, sex, disability, or age, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity it administers.

A handwritten signature in blue ink that reads "Randell H. Iwasaki".

RANDELL H. IWASAKI
Director

"Caltrans improves mobility across California"

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APPENDIX C
GLOSSARY OF TERMS

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GLOSSARY OF TECHNICAL TERMS

Acoustics: The science of sound, including the generation, transmission, and effects of sound waves, both audible and inaudible.

Air Basin: An area of the state designated by the Air Resources Board pursuant to Subdivision (a) of §39606 of the California Health and Safety Code for air quality planning purposes.

Air Quality Management Plan (AQMP): A plan prepared by an air pollution control district or agency to comply with either the federal Clean Air Act or the California Clean Air Act. An AQMP contains measures that will be taken to attain and maintain federal and state ambient air quality standards.

Air Quality Model: An algorithmic relationship between pollutant emissions and pollutant concentrations used in the prediction of a project's pollutant impact.

Air Quality Standards: Standards promulgated by state or federal pollution control districts. The specified average concentration of an air pollutant in ambient air during a specified time period at or above which undesirable effects may be produced.

Aquifer: A natural underground formation that is saturated with water, and from which water can be withdrawn. A geologic formation of sand, rock, and gravel through which water can pass and which can store, transmit, and yield significant quantities of water to wells and springs.

Arterial Road: A vehicular right-of-way whose primary function is to carry through traffic in a continuous route across an urban area while also providing some access to abutting land.

Attainment: Achieving and maintaining the air quality standards (both state and federal) for a given air pollutant.

Average Daily Traffic (ADT): The number of vehicles (trips) passing a given point on a road going in a direction during a 24-hour period.

Background Concentration: Air pollutant concentration due to natural sources and distant unidentified man-made sources.

Base Flood: In any given year, a 100-year flood that has a one percent likelihood of occurring, and is recognized as a standard for acceptable risk.

Basin Plan: A water quality control plan developed by a RWQCB for a specific geographic area. The Basin Plan identifies beneficial uses of waters, the water quality objectives needed to maintain these beneficial uses, and an implementation plan.

Beneficial Uses: The resources, services, and qualities of state waters that may be protected against quality degradation.

Berm: An embankment, usually extended in a linear alignment. Berms can function as visual screens, noise attenuators, and surface water diverters.

Best Management Practice (BMP): A BMP is any program, technology, process, siting criteria, operating method, measure, or device which controls, prevents, removes, or reduces pollution.

Biotic Community: A group of living organisms characterized by a distinctive combination of both animal and plant species in a particular habitat.

Borrow Area: An area where soil, sand, gravel, or rock is extracted and removed for use as fill, grades, or embankments on property of a different ownership or noncontiguous property of the same ownership.

California Ambient Air Quality Standards (CAAQS): Specified concentrations of air pollutants, recommended by the California Department of Health Services and adopted into regulation by the Air Resources Board, which relate the intensity and composition of air pollution to undesirable effects. CAAQS are the standards that must be met per the requirements of the California Clean Air Act.

California Department of Transportation (the Department): The state government agency responsible for the construction, maintenance, and operation of state and federal highways in California.

California Environmental Quality Act (CEQA): The California Environmental Quality Act, California Public Resources Code Sections 21000 et seq (Source: CEQA Guidelines §15353).

Channel: A water course with a definite bed and banks which confine and conduct the normal continuous or intermittent flow of water.

Clean Air Act (CAA): A federal law passed in 1970 and amended in 1977 and 1990 that sets primary and secondary National Ambient Air Quality Standards for major air pollutants and forms the basis for the national air pollution control effort.

Conformity: A requirement of the federal Clean Air Act that no department, agency, or instrumentality of the federal government shall engage in, support in any way, or provided financial assistance for license, permit, or approve any activity that does not conform with the State Implementation Plan (SIP) by causing or contributing to an increase in air pollution emissions, or violation of an air pollution standard, or frequency of violating that standard.

Criteria Pollutant: An air pollutant for which acceptable levels of exposure can be determined and for which a federal or state ambient air quality standard or criteria for outdoor concentrations has been set in order to protect public health.

Cumulative Impact: Those impacts that result from past, present, and reasonably foreseeable future actions combined with the potential impacts of the project. They can result from individually minor but collectively substantial impacts taking place over a period of time.

Day-Night Average Sound Level (Ldn): The A-weighted average sound level in decibels during a 24-hour period with a 10 dB weighing applied to nighttime sound levels (10 p.m. to 7 a.m.). This exposure method is similar to the CNEL, but deletes the evening time period (7 p.m. to 10 p.m.) as a separate factor.

Decibel (dB): A unit for expressing the relative intensity (loudness) of sounds.

Decibel, A-Weighted (dBA): A-weighting is a frequency correction that correlates overall sound pressure levels with the frequency response of the human ear.

Direct Effects: Effects which are caused by an action and occur at the same time and place.

Drainage Swale: A storm drainage conveyance structure designed to intercept, divert, and convey surface runoff (generally sheet flow) to prevent erosion and reduce pollution loading.

Encroachment: An action within the limits of the 100-year floodplain.

Endangered Species: A species of animal or plant is “Endangered” when its survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, disease, or other factors.

Environmental Protection Agency (EPA): The federal agency with primary responsibility for the implementation of federal environmental statutes, including the Clean Water Act, Clean Air Act, Safe Drinking Water Act, and the Resource Conservation and Recovery Act.

Equivalent Noise Level (Leq): A single-number representation of the fluctuating sound level in decibels over a specified period of time. It is a sound-energy average of the fluctuating level.

Erosion: The process by which material is removed from the earth's surface (including weathering, dissolution, abrasion, and transportation), most commonly by wind or water.

Expansive Soils: Soils that swell when they absorb water and shrink as they dry.

Fault: A fracture in the earth's crust forming a boundary between rock masses that have shifted.

Federal Emergency Management Agency (FEMA): The federal agency under which the National Flood Insurance Program is administered.

Flood, 100-Year: The area subject to flooding by the flood or tide having a one percent chance of being exceeded in any given year.

Floodplain: Any land area susceptible to being inundated by flood waters from any source.

Freeboard: An additional amount of height above the Base Flood Elevation (in the case of flood control) used as a factor of safety (e.g., two feet above the Base Flood) in determining the level at which a structure's lowest floor must be elevated or floodproofed to be in accordance with state or community floodplain management regulations.

General Plan: A compendium of City or County policies regarding long-term development, in the form of maps and accompanying text.

Geometric Improvements: Improvements to roads such as widening, adding signals to intersections, or adding turning lanes. These are required to mitigate traffic impacts and maintain a required level of service (LOS).

Ground Failure: Ground movement or rupture caused by strong shaking during an earthquake. Includes landslide, lateral spreading, liquefaction, and subsidence.

Ground Shaking: Ground movement resulting from the transmission of seismic waves during an earthquake.

Grubbed: Vegetation that has been removed by mechanical or manual methods.

Habitat: A place where a plant or animal naturally or normally lives or grows.

Hertz: Unit of measurement of frequency, numerically equal to cycles per second.

High-Occupancy Vehicle (HOV): A motor vehicle that is carrying at least a minimum specified number of passengers (normally at least two or more, sometimes three or more). It can be a bus, a taxi with passengers, or a car or van used for carpooling.

Hot Spot: A localized concentration of an air pollutant associated with restricted dispersion conditions, often occurring in such places as street intersections or close to the source of emissions.

Hydrology: The study of the water cycle.

Impact: The effect, influence, or imprint of an activity or the environment. Impacts include: direct or primary effects which are caused by the project and occur at the same time and place; indirect or secondary effects which are caused by the project and are later in time or farther removed in distance, but are still reasonably foreseeable.

Impervious Surface: Ground surface that cannot be penetrated by water. Includes paved and compacted surfaces, as well as those covered by buildings.

Infrastructure: Permanent utility installations, including roads, water supply lines, sewage collection pipes, and power and communications lines.

Intersection Capacity: The maximum number of vehicles that has a reasonable expectation of passing through an intersection in one direction during a given time period under prevailing roadway and traffic conditions.

Intersection Capacity Utilization Method (ICU): A method of analyzing intersection level of service by calculating a volume-to-capacity (V/C) ratio for each governing "critical" movement during a traffic signal phase.

Inversion Layer: A condition in the atmosphere through which the temperature increases with altitude, holding cooler surface air down along with its pollutants.

Land Use: The purpose or activity for which a piece of land or its buildings is designed, arranged, or intended, or for which it is occupied or maintained.

Lead Agency: The public agency which has the principal responsibility for carrying out or approving a project.

Level of Service (LOS): LOS is the qualitative measure that incorporates the collective factors of speed, travel time, traffic interruption, freedom to maneuver, safety, driving comfort and convenience, and operating costs provided by a highway facility under a particular volume condition.

Liquefaction: A geologic phenomenon in which surface and near-surface materials (soils, alluvium, etc.) behave like a liquid during seismic shaking, often causing failure of soils to support structures.

Local Agency: Local agency means any public agency other than a state agency, board, or commission.

Low-income Household: A household with an annual income usually no greater than 80 percent of the area median family income adjusted by household size, as determined by a survey of incomes conducted by a City or a County, or in the absence of such a survey, based on the latest available eligibility limits established by the U.S. Department of Housing and Urban Development (HUD).

Median: A physical divider separating lanes of traffic that typically are traveling in opposite directions.

Median Income: The annual income of each household size within a region which is defined annually by HUD. Half of the households in the region have incomes above the median and half have incomes below the median.

Mitigation Measure: Requirement developed for the project that would reduce or eliminate environmental impacts.

Mobile Sources: A source of air pollution that is related to transportation vehicles, such as automobiles or buses.

National Ambient Air Quality Standards (NAAQS): Standards set by the federal Environmental Protection Agency for the maximum levels of air pollutants that can exist in the ambient air without unacceptable effects on human health or public welfare.

National Pollutant Discharge Elimination System (NPDES): NPDES is the national program for administering and regulating discharges to waterways according to the Clean Water Act (CWA), Sections 401 and 402.

Noise: Annoying, harmful, or unwanted sound.

Noise Barrier: A wall or other solid structure constructed with the objective of attenuating (i.e., reducing) noise behind the barrier; commonly, a noise wall along a roadway.

Noise Contour: A line connecting points of equal noise level as measured on the same scale. Noise levels greater than the 60 Ldn contour (measured in dBA) require noise attenuation in residential development.

Non-attainment: The condition of not achieving a desired or required level of performance. Frequently used in reference to air quality.

Notice of Determination: A brief notice to be filed by a public agency after it approves or determines to carry out a project which is subject to the requirements of CEQA.

Parcel: The basic unit of land entitlement. A designated area of land established by plat, subdivision, or otherwise legally defined and permitted to be used or built upon.

Particulate Matter (PM₁₀): Any particulate matter with an aerodynamic diameter equal to or less than 10 microns.

Peak Hour: The one hour period during which the roadway carries the greatest number of vehicles.

Plans, Specifications, and Estimates (PS&E): The bid documents, including general design, specifications, and estimated costs.

Project: Project means the whole of an action which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment.

Public Agency: Public agency includes any state agency, board, or commission and any local or regional agency, as defined in these Guidelines.

Rare Species: A species of animal or plant is “Rare” when either: (a) although not presently threatened with extinction, the species is existing in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens; or (b) the species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered “threatened.”

Regional Transportation Plan (RTP): The RTP is created by the Metropolitan Planning Organization (MPO) or the regional planning commission.

Responsible Agency: A public agency which proposes to carry out or approve a project, for which a Lead Agency is preparing or has prepared an EIR or Negative Declaration. For the purposes of CEQA, the term “Responsible Agency” includes all public agencies other than the Lead Agency which have discretionary approval power over the project.

Right-of-Way (ROW): That portion of property which is dedicated or over which an easement is granted for public streets, utilities, or alleys.

Sediment: Organic or inorganic material that is carried by or is suspended in water and that settles out to form deposits in the storm drain system or receiving waters.

Seismic: Caused by or subject to earthquakes or earth vibrations.

Sensitive Receptors: Locations where individuals especially sensitive to chemical exposure (such as children, the infirm, and the elderly) or are expected to be located on a regular basis. These sites include hospitals, daycare centers, and schools.

South Coast Air Basin (SoCAB): A geographic area defined by the San Jacinto Mountains to the east, the San Bernardino Mountains to the north, and the Pacific Ocean to the west and south.

South Coast Air Quality Management District (SCAQMD): The agency responsible for protecting public health and welfare through the administration of federal and state air quality laws, regulations, and policies in the SoCAB.

State Transportation Improvement Plan (STIP): A capital improvement program of transportation projects funded with revenues from the State Highway Account and other sources.

Storm Water: Storm water means storm water runoff, snow melt runoff, and surface runoff and drainage.

Storm Water Drainage System: Streets, gutters, inlets, conduits, natural or artificial drains, channels and watercourses, or other facilities that are owned, operated, maintained, and used for the purpose of collecting, storing, transporting, or disposing of storm water.

Swale: An elongated or depressed landform within a landscaped area, which is designed to carry storm or other runoff.

Total Maximum Daily Load (TMDL): An estimate of the total quantity of pollutants (from all sources: point, nonpoint, and natural) that may be allowed into waters without exceeding applicable water quality criteria.

Traffic Model: A mathematical representation of traffic movement within an area or region based on observed relationships between the kind and intensity of development in specific areas.

Trip Generation: The number of vehicle trip ends associated with (i.e., produced by) a particular land use or traffic study site. A trip end is defined as a single vehicle movement. Roundtrips consist of two trip ends.

Vehicle Miles Traveled (VMT): A measure of both the volume and extent of motor vehicle operation; the total number of vehicle miles traveled within a specified geographical area (whether the entire country or a smaller area) over a given period of time.

Volume-to-Capacity Ratio (V/C): In reference to public services or transportation, ratio of peak hour use to capacity. Expressed as v/c, this is a measure of traffic demand on a facility (expressed as volume) compared to its traffic-carrying capacity.

Watershed: The drainage basin contributing water, organic matter, dissolved nutrients, and sediments to a stream, estuary, or lake.

Wetlands: An area at least periodically wet or flooded; where the water table stands at or above the land surface (bogs and marshes).

Wildlife Corridor: A natural corridor, such as an undeveloped ravine, that is frequently used by wildlife to travel from one area to another.

Zoning: The division of a municipality into districts for the purpose of regulating land use, types of buildings, required yards and setbacks, parking, and other prerequisites to development. Zones are generally shown on a map and the text of the zoning ordinance specifies requirements for each zoning category.

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APPENDIX D

ENVIRONMENTAL COMMITMENTS RECORD

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ENVIRONMENTAL COMMITMENTS RECORD

District 12-Antonio Parkway
Dist.-Co. Rte. (or Local Agency)

Local Roadway
K.P./K.P.(P.M./P.M.)

12-932073L
E.A. (State Project)

Federal ID #STPL-5955(071)
Proj. No. (Local project)
(Fed. Prog. Prefix
Proj. No., Agr.No.)

Environmental Commitments Report

Item #	Impact	Avoidance, Minimization, and/or Mitigation Measures	Review Responsibility	Implementation Responsibility	Timing/Phase	Status	Approval/Signature/Date
LU-1	Land Use	Prior to approval of final construction plans, the County of Orange shall obtain all necessary right-of-way for the ultimate improvements. Should the roadway precede the development of the adjacent land uses and offers of dedication have not been made, the County shall work with the landowner(s) to acquire the land or to allow for early dedication of the necessary right-of-way.	Manager , Planned Communities/Public Works	County of Orange	Prior to approval of final construction plans		
U-1	Utilities	During project design, Orange County Public Works will coordinate with all affected utility service providers on the precise requirements for relocating the utilities and providing for the extension of utilities within the Antonio Parkway right-of-way.	Manager , Planned Communities/Public Works	Orange County Public Works	During project design		
ES-1	Emergency Services	Consistent with County of Orange standard provisions, a Traffic Management Plan would be prepared to ensure that emergency access is maintained during construction of the proposed project. A component of the Traffic Management Plan would be to coordinate with the emergency service providers to ensure their operations can be adjusted during construction, if necessary.	Manager , Planned Communities/Public Works	Orange County Public Works	During the Final Design Phase		

Environmental Commitments Report (Continued)

Item #	Impact	Avoidance, Minimization, and/or Mitigation Measures	Review Responsibility	Implementation Responsibility	Timing/Phase	Status	Approval/Signature/Date
T-1	Traffic and Transportation	During the Final Design Phase, a Traffic Management Plan shall be developed to reduce potential delays and conflicts associated with construction activities. The Traffic Management Plan shall be approved by the Manager of Planned Communities/Public Works. The plan shall identify construction phasing and the associated Detour Plan and Signage Program to alert the public of ongoing construction activities.	Manager of Planned Communities/Public Works	Orange County Public Works	During the Final Design Phase		
VR-1	Visual Resources	As part of final design, landscape plans consistent with the Landscape Corridor requirements of the County of Orange Scenic Highway Component shall be prepared. Landscaping shall be installed subsequent to project construction.	Manager of Planned Communities/Public Works	Orange County Public Works	During the Final Design Phase/ subsequent to construction		
CUL-1	Cultural Resources	If cultural materials are discovered during construction, all earth-moving activities within and around the immediate discovery area will be diverted until a qualified Archaeologist can assess the nature and significance of the find.	Resident Engineer/ Qualified Archaeologist	Archaeologist	During construction		
CUL-2	Cultural Resources	If human remains are discovered, <i>California Health and Safety Code</i> , Section 7050.5 states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains, and the County Coroner must be contacted, pursuant to Section 5097.98 of the <i>California Public Resources Code</i> (PRC). If the remains are thought to be Native American, the Coroner will notify the NAHC, who will then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains would contact the County of Orange Project Engineer	Resident Engineer/ Qualified Archaeologist	County Coroner and County of Orange Project Engineer	During construction		

Environmental Commitments Report (Continued)

Item #	Impact	Avoidance, Minimization, and/or Mitigation Measures	Review Responsibility	Implementation Responsibility	Timing/Phase	Status	Approval/Signature/Date
		so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.					
WQ-1	Water quality and storm water runoff	Preparation and implementation of construction site BMPs in compliance with the provisions of the Construction General Permit ((NPDES No. CAS000002) Water Quality Order 2009-0009-DWQ, State Water Resources Control Board (SWRCB) National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction Activity) and any subsequent permit as they relate to construction activities for the project. This will include submission of a Notice of Intent (NOI) to the San Diego RWQCB at least 30 days before the start of construction, preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP), and submission of a Notice of Construction Completion (NCC) to the San Diego RWQCB upon completion of construction and stabilization of the project site.	Resident Engineer	Construction Contractor and Resident Engineer	During construction		
WQ-3	Water quality and storm water runoff	Consideration and incorporation of source control and treatment control best management practices (BMPs) for the project in accordance with the procedures outlined in the Drainage Area Master Plan and Local Implementation Plan (2003 or subsequent issuance) will be followed.	Resident Engineer	Construction Contractor and Resident Engineer	During construction		

**Environmental Commitments Report
(Continued)**

Item #	Impact	Avoidance, Minimization, and/or Mitigation Measures	Review Responsibility	Implementation Responsibility	Timing/Phase	Status	Approval/Signature/Date
WQ-3	Water quality and storm water runoff	During dewatering activities, if necessary, the provision of "General Waste Discharge Requirements for Discharges from Groundwater Extraction and Similar Discharges to Surface Waters within the San Diego Region except for San Diego Bay (WDR)" [Order No. R9-2008-0002, NPDES No. CAG919002] for regions other than San Diego Bay, and comply with the "General Waste Discharge Requirements for Temporary Groundwater Extraction and Similar Waste Discharges to San Diego Bay and Storm Drains or other conveyance systems tributary thereto" [Order No. 2000-09; NPDES No. CAG919001] for discharges to the San Diego Bay area, as they relate to construction activities for the project, will be followed. This will include submission of an NOI to the San Diego RWQCB at least three months before the start of dewatering and compliance with all applicable provision in the de minimus permit, Antonio Parkway Water Quality Assessment Report 33 26.02.2010 including water sampling, analysis, and reporting of dewatering-related discharges.	Resident Engineer	Construction Contractor and Resident Engineer	During construction		
G-1	Geology/Soils/Seismic/Topography	The proposed project shall comply with all applicable County of Orange standards related to design and construction, as delineated in the <i>Orange County Grading Code and Manual</i> .	Project Engineer	Orange County Public Works	During project design		

**Environmental Commitments Report
(Continued)**

Item #	Impact	Avoidance, Minimization, and/or Mitigation Measures	Review Responsibility	Implementation Responsibility	Timing/Phase	Status	Approval/Signature/Date
G-2	Geology/Soils/Seismic/Topography	During final design, foundations supporting the proposed bridge shall be designed to withstand the effects of soil liquefaction. Ground improvements at bridge and retaining wall locations shall be determined during final design.	Project Engineer	Orange County Public Works	During final design		
HZ-1	Hazardous Waste/Materials	Prior to the initiation of construction, the contractor shall develop an approved Health and Safety Contingency Plan (HSCP) in the event that unanticipated/unknown environmental contaminants are encountered during construction. The plan shall be developed to protect workers, safeguard the environment, and meet the requirements of Title 8 of the <i>California Code of Regulations</i> (CCR), "General Industry Safety Orders – Control of Hazardous Substances". The HSCP shall be prepared as a supplement to the Contractor's Site-Specific Health and Safety Plan, which shall be prepared to meet the requirements of CCR Title 8, "Construction Safety Orders".	Resident Engineer	Contractor	Prior to initiation of construction		
AQ-1	Air Quality	During construction of the proposed project, the facility owner/developer and its contractors shall be required to comply with regional rules, which shall assist in reducing short-term air pollutant emissions. SCAQMD Rule 402 requires that air pollutant emissions not be a nuisance off-site. SCAQMD Rule 403 requires that fugitive dust be controlled with the best available control measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. Active construction operations shall utilize one or more of the applicable best available control measures identified in Tables 1	Resident Engineer	Orange County Public Works/Contractor	During construction		

**Environmental Commitments Report
(Continued)**

Item #	Impact	Avoidance, Minimization, and/or Mitigation Measures	Review Responsibility	Implementation Responsibility	Timing/Phase	Status	Approval/Signature/Date
		and 2 of Rule 403 to minimize fugitive dust emissions from each fugitive dust source type.					
N-1	Noise	During construction all activities will comply with sound control measures outlined in Section 7-1.011 of the Caltrans' Standard Specifications.	Resident Engineer	Orange County Public Works/Contractor	During construction		
N-2	Noise	During construction, all noise generating activities be limited to the hours of 7 a.m. to 8 p.m. on weekdays and Saturdays. No noise generating activities shall occur on Sundays and holidays in accordance with the County of Orange <i>Noise Ordinance</i> .	Resident Engineer	Orange County Public Works/Contractor	During construction		
N-3	Noise	As part of the contract specifications, the contractor shall abide by the following conditions: (1) All construction vehicles or equipment, fixed or mobile, operated within 1,000' of a dwelling shall be equipped with properly operating and maintained mufflers. (2) All operations shall comply with Orange County Codified Ordinance Division 6 (Noise Control). (3) Stockpiling and/or vehicle staging areas shall be located as far as practicable from dwellings. Notations on the front sheet of the project's grading plans, will be considered as adequate evidence of compliance with this condition.	Resident Engineer	Contractor	During construction		
B-1	Natural communities	Prior to the initiation of construction, the County of Orange shall approve a Biological Resources Construction Plan (BRCP) consistent with the requirements of Appendix U of the Southern HCP.	County of Orange		Prior to the initiation of construction		

APPENDIX E
LIST OF ACRONYMS

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Acronym	Acronym and Abbreviation Description
A	
ACMs	asbestos-containing materials
ACOE	U.S. Army Corps of Engineers
ADA	Americans with Disabilities Act
ADT	average daily traffic
APE	Area of Potential Effect
ASR	Archaeological Survey Report
B	
BMPs	Best Management Practices
BRCP	Biological Resources Construction Plan
C	
CARB	California Air Resources Board
CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CERFA	Community Environmental Response Facilitation Act of 1992
CFR	Code of Federal Regulations
cfs	cubic square foot/feet
CHHSL	California Human Health Screening Levels
CHP	California Highway Patrol
CMF	cartridge media filtration
CO	carbon monoxide
CVWD	Capistrano Valley Water District
CWA	Clean Water Act
D	
DAMP	Drainage Area Management Plan
dBA	A-weighted decibel(s)
DDE	Dichlorodiphenyldichloroethylene
Department	California Department of Transportation
DTSC	Department of Toxic Substances Control (California)
E	
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
F	
FACW	Facultative Wetland
FEIR	Final Environmental Impact Report
FEMA	Federal Emergency Management Agency

Acronym	Acronym and Abbreviation Description
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FIRM	Flood Insurance Rate Map
FIS	Flood Insurance Study
FONSI	Finding of No Significant Impact
FTA	Federal Transit Administration
G	
GERA	Gobernadora Ecological Restoration Area
GIS	Geographic Information System
GLA	Glenn Lukos Associates
H	
HCM	Highway Capacity Manual
HCP	Habitat Conservation Plan
HP	Habitat Present
HPSR	Historic Property Survey Report
HSCP	Health and Safety Contingency Plan
HUD	Department of Housing and Urban Development
I	
I-5	Interstate 5
IA	Implementation Agreement
ICU	intersection capacity utilization
IRAA	Indoor Radon Abatement Act of 1988
ITP	Incidental Take Permit
J	
K	
L	
LAFCO	Local Agency Formation Commission
$L_{eq}(h)$	sound energy equivalent noise level (one hour)
LOP	Letter of Permission
LOS	level of service
LSV	Low Speed Vehicle
M	
MLD	Most Likely Descendent
MPAH	Master Plan of Arterial Highways
MPO	Metropolitan Planning Organization
MS4	Municipal Separate Storm Sewer System
MSAA	Master Streambed Alteration Agreement
MSAT	Mobile Source Air Toxic

Acronym	Acronym and Abbreviation Description
N	
NAAQS	National Ambient Air Quality Standards
NAC	Noise Abatement Criteria
NAHC	Native American Heritage Commission
NCCP	Natural Community Conservation Plan
NEPA	National Environmental Policy Act
NES	Natural Environment Study
NEV	Neighborhood Electric Vehicle
NHPA	National Historic Preservation Act of 1966
NO ₂	nitrogen dioxide
NOA	Naturally Occurring Asbestos
NOAA	National Oceanic and Atmospheric Administration
NOAA Fisheries	National Marine Fisheries Service
NO _x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
O	
O ₃	ozone
OBL	obligate wetland
OCP	Orange County Projections
OCFA	Orange County Fire Authority
OCFCD	Orange County Flood Control District
OCHCA	Orange County Health Care Agency
OCSD	Orange County Sheriff's Department
OCTA	Orange County Transportation Authority
OCTAM	Orange County Transportation Analysis Model
OHWM	Ordinary High Water Mark
OSHA	Occupational Safety & Health Act
OWTS	on-site treatment systems
P	
PA	Programmatic Agreement
Pb	lead
PM	particulate matter
PM _{2.5}	fine particulate matter less than 2.5 micrometers in diameter
PM ₁₀	respirable particulate matter less than 10 micrometers in diameter
POAQC	projects of air quality concern
PRC	Public Resources Code

Acronym	Acronym and Abbreviation Description
Q	
R	
RCP	Regional Comprehensive Plan
RCRA	Resource Conservation and Recovery Act of 1976
RECs	recognized environmental conditions
RMV	Rancho Mission Viejo
ROGs	reactive organic gases
RTIP	Regional Transportation Improvement Program
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
S	
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
SAMP	Special Area Management Plan
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SCSAM	South (Orange) County Sub-Area Model
SDG&E	San Diego Gas & Electric
SDRWQCB	San Diego Regional Water Quality Control Board
sf	square foot/feet
SHPO	State Historic Preservation Officer
SMWD	Santa Margarita Water District
SO ₂	sulfur dioxide
SoCAB	South Coast Air Basin
SR-74	State Route 74
SR-241	State Route 241
SWRCB	State Water Resources Control Board
SWPPP	Storm Water Pollution Prevention Plan
T	
TCWG	Transportation Conformity Working Group
TDM	Transportation Demand Management
TSCA	Toxic Substances Control Act
U	
U.S.	United States
USC	United States Code
USDOT	U.S. Department of Transportation
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
UST	underground storage tank

Acronym	Acronym and Abbreviation Description
V	
v/c	volume/capacity
VMТ	vehicle miles traveled
W	
WQMP	Water Quality Management Plan
X	
Y	
Z	
Symbols	
°F	degrees Fahrenheit

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LIST OF TECHNICAL STUDIES

The following technical studies were prepared in conjunction with the EA. Copies of the technical studies are available under separate cover.

- Antonio Parkway Traffic Study January 2010
- Visual Impact Memorandum May 2010
- Historic Property Survey Report March 2010
- Archaeological Survey Report March 2010
- Location Hydraulic Study-Antonio Parkway Bridge
Stream Bank Revetment-San Juan Creek May 2010
- Best Management Practices Concept Plan for
Antonio Parkway/La Pata Avenues April 2008
- Phase I Environmental Assessment and Initial
Site Assessment for Hazardous Wastes January 2010
- Air Quality Assessment for Antonio Parkway Widening May 2010
- Noise Study Report for Antonio Parkway Widening
Improvements January 2010
- Antonio Parkway Natural Environment Study January 2010
- Jurisdictional Delineation/Assessment January 2010
- Air Quality Conformity Analysis February 2010
- Water Quality Assessment Report February 2010

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